Best Way's book of

MATHEMATICS

ANSWER KEY

4

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1 Numbers and Expanded Notation

Get Started

1. 9999

2. Number of yellow cars = 1635

Number of blue cars = 1365

1635 > 1365

Number of yellow cars > Number of blue cars

3. Number of white cars = 2999

If one more white car is added = 2999 + 1 = 3000

Therefore, total number of white cars is equal to 3000, if one more white car is added.

Exercise-1.1

	Number	Place value(Face value×product)	Face value(Digit itself at whatever place it may be)
(a)	⑥3600	6×10000=60000	6
(b)	0318②	2×1=2	2
(c)	90④67	4×100=400	4
(d)	76⓪41	0×100	0

2. (a) 72583 = Seven two thousand five hundred eighty three.

(d) 93542 = Ninety three thousand five hundred forty two

3. (a) 57420

(b) 83092

(c) 86540

(d) 9005

4. Copy

5. (a) 53, 849 = 5000 + 3000 + 800 + 40 + 9

(b) 15, 683 = 10000 + 5000 + 600 + 80 + 3

(c) 10, 403 = 10000 + 400 + 3

(d) 53, 969 = 50000 + 3000 + 900 + 60 + 9

6. (a) 52764

(b) 70639

7. (a) 20000 + 4000 + 700 + 30 + 9

(b) 90000 + 40 + 5

(c) 80000 + 2000 + 900 + 40 + 3

(d) 80000 + 800 + 80 + 8

8. (a) 56302, 56303, 56309, 56305, 56306, 56307 56308, 56309, 56310, 56311, 56312, 56313, 56314, 56315, 56316, 56317, 56318.

(b) 44456, 44457, 44458, 44459, 44460, 44461, 44452

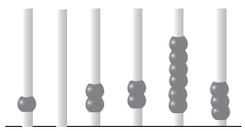
(c) 23057, 23058, 23059, 23060, 23061, 23062, 23063, 23064

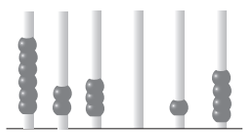
(d) 54496, 54497, 54498, 54499, 54510

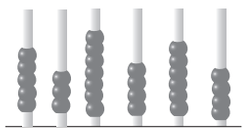
Exercise 1.2

1.

	Lakhs	Thousands		Ones		
	Lakh (L)	Ten Thousands (TTH)	Thousands (TH)	Hundreds	Tens (T)	Ones (O)
(a)	2	4	2	6	4	5
(b)	5	5	7	0	3	6
(c)	8	3	7	4	3	6
(d)	9	0	4	3	9	6

2. (a) 
1,02,263

(b) 
6,23,014

(c) 
5,37,464

(d) 
7,00,430

3. (a) 2, 16, 064 = Two lakh sixteen thousand sixty four.

(b) 5, 26, 397 = Five lakh twenty six thousan three hundred ninety seven.

(c) 8, 49, 009 = Eight lakh forty nine thousnd nine.

(d) 7, 27, 114 = Seventy lakh twenty seven thousnd one hundred fourteen.

4. Place value = Face value × Product of the place

	Number	Face value	Place	Place value
(a)	3, 46, 974	9	100	9×100 = 900
(b)	8, 46, 047	4	10000	4×10000 = 40000
(c)	1, 27, 364	7	100000	7×100000 = 700000
(d)	2, 73, 640	0	1	0×1 = 0
(e)	2, 38, 243	2	100000	2×100000 = 200000
(f)	1, 08, 244	8	1000	8×1000 = 8000

5. (a) 3, 93, 416

(b) 9, 53, 609

(c) 8, 31, 000

(d) 8, 14, 011

(e) 5, 10, 007

6. (a) 500000 + 6000 + 900 + 40

(b) 200000 + 20000 + 1000 + 900 + 30 + 7

(c) 700000 + 30000 + 7000 + 400 + 3

(d) 400000 + 30000 + 8000 + 200 + 50 + 9

7. (i) (a) 24384, 24394, 24404, 24414, 24424 (Increasing by 10)

(b) 536508, 536518, 536528, 536538, 536548, 536558 (Increasing by 10)

(ii) (a) 509461, 509561, 509661, 509761, 509861 (Increasing by 100)

(b) 273478, 273578, 273678, 273778, 273878 (Increasing by 100)

(iii) (a) 931436, 932436, 933436, 934436, 935436 (Increasing by 1000)

(b) 761436, 762436, 763436, 764436, 765436 (Increasing by 1000)

8. (Succesor = Number + 1)

(Predecessor = Number – 1

(a) Succesor = 535364 + 1 = 535365

Predecessor = 535364 – 1 = 535363

(b) Succesor = 273649 + 1 = 273650

Predecessor = 273649 – 1 = 273648

(c) Succesor = 811243 + 1 = 811244

Predecessor = 811243 – 1 = 811242

9. (a) 6 4 3 6 5 3

Place value = 6×100 = 600

Place value = 6×100000 = 600000

Sum = 600000 + 600 = 600600

Difference between them = 600000–600 =599400

(b) 3 6 2 6 3 8

Place value = 6×100 = 600

Place value = 6×10000 = 60000

Sum = 60000 + 600 = 60600

Difference between them = 60000–600 =59400

(c) 9 3 6 2 6 3

Place value = 6×100 = 60

Place value = 6×1000 = 6000

Sum = 6000 + 60 = 6060

Difference between them = 6000–60 = 5940

(d) 6 4 3 3 8 6

Place value = 6×1 = 6

Place value = 6×10000 = 60000

Sum = 600000 + 6 = 600006

Difference between them = 600000 – 6 = 599994

10. Total masks sold: 1,09,999

If one more masks will be sold: Total masks sold +1

=109999+1

= 110000

Answer: If one more mask will be sold then total masks sold will be 110000.

Exercise 1.3

1. (a) 1**9**, 5493 (>) 16**8**, 679

(b) **5**8, 856 (<) **6**9, 460

(c) 8**2**, 201 (<) 8**8**, 990

(d) 8,99 9**8**9 (<) 89, 999**9**

2. Ascending order (Smallest to Greatest)

(a) 75, 690 < 77, 656 < 77, 895 < 88, 975

(b) 68, 560 < 88, 850 < 88, 856, < 88, 876

(c) 56, 564 < 4, 56, 564 < 5, 56, 564 < 6, 56, 564

3. Descending order (Greatest to Smallest)

(a) 32, 560 > 32, 206 > 32, 105 > 32, 103

(b) 78, 957 > 78, 857 > 67, 876 > 67, 856

(c) 6, 79, 568 > 6, 69, 597 > 6, 59, 678 > 6, 59, 576

4. Total number of English books: 13, 354

Total number of Maths books: 1, 00, 451

Total number of Science books: 1, 00, 041

13, 354 < 1, 00, 041, < 1, 00, 451

English books < Science books < Maths books

Answer: English books are least in number. whereas maths books are most in number.

Exercise 1.4

1.

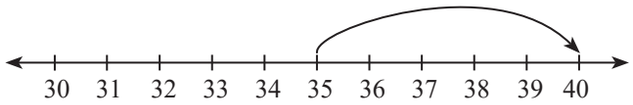
	Digits	**Greatest number (Writing the digits in descending order and repeating the greatest digits to form the greatest number)**	**Smallest number (Writing the digits in ascending order and repeating the smallest digit to form smallest number)**
(a)	2, 7, 3, 5, 1	75, 321	123, 57
(b)	0, 1, 9, 6	99610	10, 069 (To built the smallest number with 0 as one of the given digits we write 0 at the second place from the left)

2.

	Digits	Greatest number (Writing the digits in descending order and repeating the greatest digits to form the greatest number)	Smallest number (Writing the digits in ascending order and repeating the smallest digit to form smallest number)
(a)	5, 8, 3, 4	8, 88, 543	3, 33, 458
(b)	5, 0	5, 55, 550	5, 00, 000 (To built the smallest number with 0 as one of the given digits we write 0 at the second place from the left)

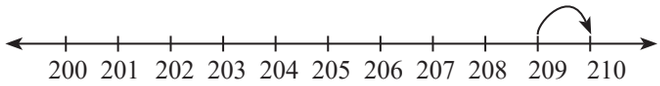
Exercise 1.5

1. (a)



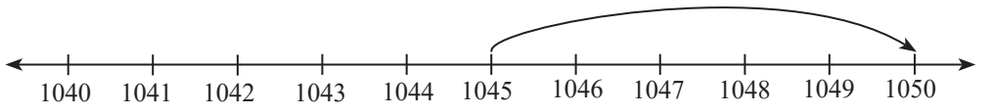
35 is rounds upto 40.

(b)



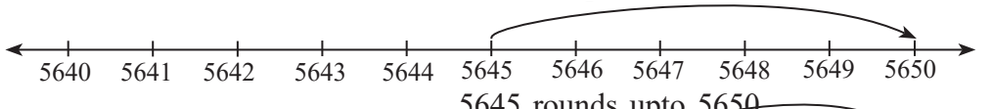
209 is rounds upto 210.

(c)



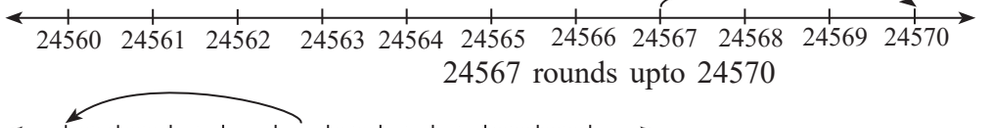
1045 rounds upto 1050

(d)



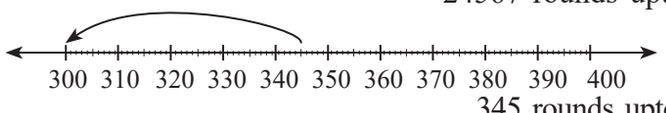
5645 rounds upto 5650

(e)



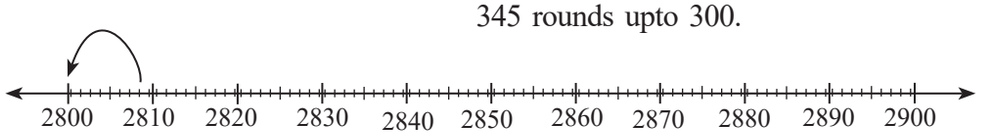
24567 rounds upto 24570

2. (a)



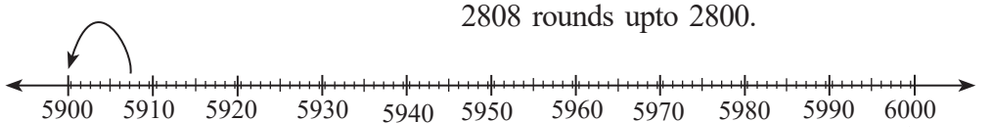
345 rounds upto 300.

(b)



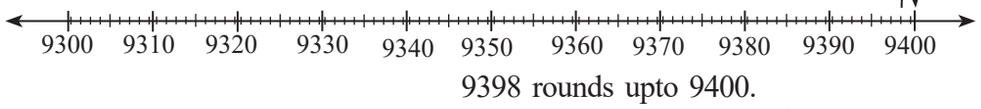
2808 rounds upto 2800.

(c)



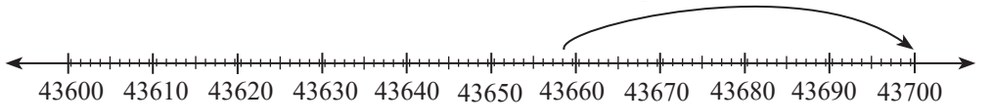
5907 rounds upto 5900.

(d)



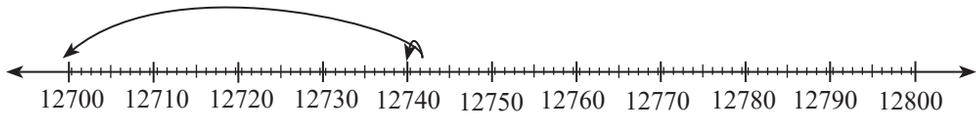
9398 rounds upto 9400.

(e)



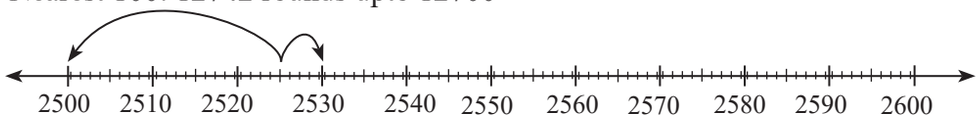
43659 rounds upto 43700.

3. (a)



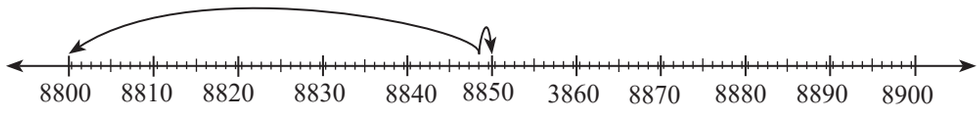
Nearest 10: 12742 rounds upto 12740
Nearest 100: 12742 rounds upto 12700

(b)



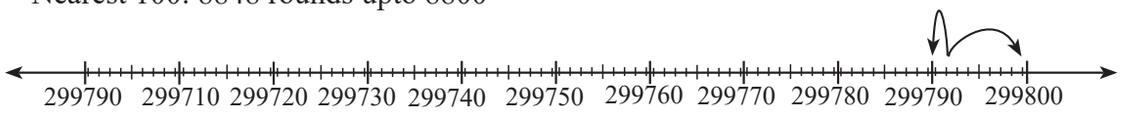
Nearest 10: 2525 rounds upto 2530
Nearest 100 : 2525 rounds upto 2500

(c)



Nearest 10: 8848 rounds upto 8850
Nearest 100: 8848 rounds upto 8800

(d)



Nearest 10: 299,792 rounds upto 299,790
Nearest 100: 299,792 rounds upto 299,800

Exercise 1.6

1. (a) 35 = 30 + 5 = XXXV
(b) 32 = 30 + 2 = XXXII
(c) 86 = 80 + 6 = LXXXVI
(d) 87 = 80 + 7 = LXXXVII
(e) 29 = 20 + 9 = XXIX
(f) 97 = 100 - 10 + 7 = XCVI
(g) 8 = 5 + 3 = VIII
(h) 69 = 60 + 9 = LXIX
(i) 50 = 50 = L
(j) 42 = 50 - 10 + 2 = XLII

2. (a) LXXXVIII = 50 + 30 + 8 = 88
(b) XLVIII = 50 – 10 + 8 = 48
(c) XXIX = 20 + (10 – 1) = 20 + 9 = 29
(d) LXVII = 50 + 10 + 5 + 2 = 67
(e) LXXI = 50 + 20 + 1 = 71
(f) XXXI = 30 + 1 = 31
(g) XLIX = (50 – 10) + 9 = 40 + 9 = 49
(h) XCVIII = (100 – 10) + 8 = 90 + 8 = 98
(i) XCI = (100 – 10 + 1 = 90 + 1 = 91
(j) XXX = 10 + 10 + 10 = 30

3. (a) XL – XI = (50 – 10) – (10 + 1) = 40 – 11 = 29 = XXIX
(b) LX – XC = (50 + 10) – (50 – 10) = 60 – 40 = 20 = XX
(c) XXV + VIII (20 + 5) + (8) = 25 + 8 = 33 = XXXIII
(d) LXXX + IV = (50 + 30) + (5 – 1) = 80 + 4 = 84 = LXXXIV
(e) XXXIX – XVI = 30 + (40 – 1) – (10 + 6) = 30 + 9 – 16 = 39 – 16 = 23 = XXIII
(f) XLV + XX = (50 – 10) + 5 + (20) = 40 + 5 + 20 = 65 = LXV
(g) LXXX – XL = (50 + 30) – (50 – 10) = 80 – 40 = 40 = XL
(h) XC – XL = (100 – 10) – (50 – 10) = 90 – 40 = 50 = L

Learning Updates

1.

	Digits	Face value(Digit itself at whatever place it may be)	Place value(Face value×product of the place)
(a)	23,4**7**6	7	7×10 = 70
(b)	6,3**2**,783	2	2×1000 = 2000
(c)	**6**,67,364	6	6×10000 = 60000
(d)	1,00,**3**86	3	3×100 = 300

(a) 26,4**3**6 26,4**5**6 → <

(b) 5, **8**3, 648 5, **4**3, 648 → >

(c) 29,**9**11 29,**1**91 → >

(d) 4, **0**9, 150 4, **9**0, 150 → <

3. (a) Ascending order: Smallest to Greatest

38500 < 42800 < 58002 < 79542 < 82500 < 370019

(b) Descending order: Greatest to Smallest

984777 > 87696 > 78265 > 27852 > 9998 > 3605

4.

	Greatest number (Writing the digits in descending order and repeating the greatest digits to form the greatest number)	Smallest number (Writing the digits in ascending order and repeating the smallest digit to form smallest number)
(a)	843	348
(b)	870	708 (To built the smallest number with 0 as one of the given digits we write 0 at the second place from the left)
(c)	931	139

5. Smallest 6 digit number using 8, 4, 7 and 3 = 333478

Smallest number (Writing the digits in ascending order and repeating the smallest digit to form the smallest number)

6. (a) 65 + 27 ☐ LXXXIII

64 ☐ 50 + 30 + 3

92 > 83

(b) 97 – 38 ☐ LXXI

59 ☐ 50 + 20 + 1

59 < 71

(c) 8 × 8 ☐ XXVIII

64 ☐ 20 + 5 + 3

64 > 28

(d) XXXV ☐ 100 – 65

30 + 5 ☐ 35

35 = 35

Mutiple Choice Questions

1. 60 Tens = 60 × 10 = 600 = 6 Hundreds

(c) 6 Hundreds

2. 1 Lakh = 1,00,000 = 6 digit number (c) Six

3. (d) 58560

4. 89⑨76, 76⑤87, 787⑦77, 209⓪94

Digits at hundreds place 9, 6, 7, 0

9 > 7 > 5 > 0 (d) 2009094

5. 79 = 50 + 20 (10 – 9) = 70 + 9 = LXXIX

(a) LXXIX

6. 64 = 50 + 10 + (5 – 1) = 60 + 4 = LXIV

(a) LXIV

2 Addition and Subtraction

Get Started

(a)
$$\begin{array}{r} {\scriptstyle ①\ ①\ \ } \\ 3\ 5\ 7\ 7 \\ +\ 1\ 2\ 3\ 4 \\ \hline 4\ 8\ 1\ 1 \end{array}$$

(b)
$$\begin{array}{r} {\scriptstyle ①\ \ \ } \\ 4\ 6\ 4\ 0 \\ +\ 2\ 9\ 0\ 9 \\ \hline 7\ 5\ 4\ 9 \end{array}$$

(c)
$$\begin{array}{r} {\scriptstyle \ \ \ ①\ } \\ 2\ 0\ 1\ 9 \\ +\ 4\ 4\ 7\ 7 \\ \hline 6\ 4\ 9\ 6 \end{array}$$

(d)
$$\begin{array}{r} {\scriptstyle ①\ ①\ \ } \\ 3\ 8\ 9\ 1 \\ +\ \ 7\ 9\ 4 \\ \hline 4\ 6\ 8\ 5 \end{array}$$

(e)
$$\begin{array}{r} {\scriptstyle ①\ ①\ ①\ } \\ 1\ 8\ 5\ 5 \\ +\ 2\ 1\ 8\ 6 \\ \hline 4\ 0\ 4\ 1 \end{array}$$

(f)
$$\begin{array}{r} {\scriptstyle ①\ ①\ ①\ } \\ 4\ 8\ 7\ 9 \\ +\ \ 8\ 8\ 8 \\ \hline 5\ 7\ 6\ 7 \end{array}$$

(you can choose and add up other pairs too)

Exercise 2.1

1. (a) 2536 + 0 = [2536]

$$\begin{array}{r} 2\ 5\ 3\ 6 \\ +\ \ \ \ \ 0 \\ \hline 2\ 5\ 3\ 6 \end{array}$$

(b) 999 + [1] = 1000

$$\begin{array}{r} 9\ 9\ 9 \\ +\ \ \ \ 1 \\ \hline 1\ 0\ 0\ 0 \end{array}$$

(c) [0] + 5365 = 5365

$$\begin{array}{r} \ \ \ \ \ 0 \\ +\ 5\ 3\ 6\ 5 \\ \hline 5\ 3\ 6\ 5 \end{array}$$

(d) [1] + 399 = 400

$$\begin{array}{r} {\scriptstyle ①\ ①\ } \\ \ \ \ 1 \\ +\ 3\ 9\ 9 \\ \hline 4\ 0\ 0 \end{array}$$

2. (a) 79 + 30

79 > 30

79 + 30

70 + 9

70+ 30 = 100

100 + 9 = 109

So, 79 + 30 = 109

(b) 156 + 37

156 > 37

156 + 37

100 + 50 + 6

100 + 37 = 137

137 + 50 = 187

187 + 6 = 193

So, 156 + 37 = 193

(c) 248 + 214

248 > 214

248 + 214

200 + 40 + 8

200 + 214 = 414

414 + 40 = 454

454 + 8 = 462

So, 248 + 214 = 462

(d) 305 + 168

305 > 168

305 + 168

300 + 5

300 + 168 = 468

468 + 5 = 473

So, 305 + 168 = 473

3. (a) 62 + 56

62 > 56

62 + 56

50 + 6

62 + 50 = 112

112 + 6 = 118

So, 62 + 50 = 118

(b) 20 + 58

20 < 58

20 + 58

20 + 0

20 + 58 = 78

0 + 78 = 78

So, 20 + 58 = 78

(c) 204 + 537

204 < 537

204 + 537

200 + 4

200 + 537 = 737

4 + 737 = 741

So, 4 + 737 = 741

(d) 204 + 305

204 < 305

204 + 305

200 + 4

200 + 305 = 505

505 + 4 = 509

so, 204 + 305 = 509

4. (a) 61 + 27

60 + 1 20 + 7

60 + 20 – 80

1 + 7 = 8

80 + 8 = 88

so, 61 + 27 = 88

(b) 119 + 244

100 + 10 + 9 200 + 40 + 4

100 + 200 = 300

10 + 40 = 50

9 + 4 = 13

300 + 50 + 13 = 363

So, 119 + 244 = 363

(c) 58 + 248

0 + 50 + 8 200 + 40 + 8

0 + 200 = 200

50 + 40 = 90

8 + 8 = 16

200 + 90 + 16 = 306

So, 200 + 90 + 16 = 306

(d) 340 + 89

300 + 40 80+ 9

300 + 80 = 380

40 + 9 = 49

380 + 49 = 429

so, 340 + 89 = 429

5. (a) 127 + 425

100 + 100 +100 100 + 10 + 10 + 5

127 + 100 = 227 527 + 10 = 537

227 + 100 + 327 537 + 10 = 547

327 + 100 = 427 547 + 5 = 552

427 + 100 = 527

So, 127 + 425 = 552

(b) 546 + 148

100 + 10 +10 + 10 + 10 + 8

546 + 100 = 646

646 + 10 = 656

656 + 10 = 666 **So, 546 + 148 = 694**

666 + 10 = 676

676 + 10 = 686

686 + 8 = 694

(c) 374 + 109

100 + 9

371 + 100 = 471

471 + 9 = 480

So, 371 + 109 = 480

(d)

146 + 836

100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 10 + 10 + 10 + 6

146 + 100 = 246

246 + 100 = 346

346 + 100 = 446

446 + 100 = 546

546 + 100 = 646

646 + 100 = 746

746 + 100 = 846

846 + 100 = 946

946 + 10 = 956

956 + 10 = 966

966 + 10 = 976

976 + 6 = 982

So, 146 + 836 = 982

6. Number of students in class III: 320

Number of students in class IV: 489

Total students: Number of students in class III + Number of students in class IV

= 320 + 489

= 809

	①		
	3	2	0
+	4	8	9
	8	0	9

Answer: There are total 809 students in class III and IV

Exercise: 2.2

1. (a)

	2	4	3	5
+	1	3	2	3
	3	7	5	8

(b)

		1	7	3	4
+	2	4	2	3	4
	2	5	9	6	8

(c)

	1	3	5	3	2
+	3	2	3	2	5
	4	5	8	5	7

2. (a)

	2	1	2	0
	2	3	0	3
+	3	0	4	2
	7	4	6	5

(b)

		3	7	2	1
		1	0	4	3
+	5	1	1	2	0
	5	5	8	8	4

(c)

	1	2	3	4	2
	2	3	3	0	3
+	5	2	0	3	1
	8	7	6	7	6

3. (a)

	2	1	3	0
+	4	2	2	5
	6	3	5	5

(b)

	4	5	3	2	0
+	3	2	0	0	3
	7	7	3	2	3

(c)

	4	5	3	2	1
	2	1	0	2	0
+	1	3	3	4	5
	7	9	6	8	6

4. Money spent by Varsha on purchasing scooter: ₹50245

Money spent by Varsha on purchasing accessories: ₹7531

Total money spent by Varsha: Money spent on purchasing scooter + Money spent on purchasing accessories

= ₹50245 + ₹7531

= ₹ 57776

			₹		
	5	0	2	4	5
+		7	5	3	1
	5	7	7	7	6

Answer: Total money spent by Varsha is ₹57776

5. Number of males in society: 3721

Number of females in society: 6278

Total people in the society: Number of male + Number of females

= 3721 + 6278

= 9999

	3	7	2	1
+	6	2	7	8
	9	9	9	9

Answer: There are 9999 people in the society.

Exercise 2.3

1. (a)

	①	①	①	
	2	5	8	4
+		7	8	9	8
	1	0	4	8	2

(b)

	①		①	①	
	1	3	2	4	5
+	3	9	2	8	5
	5	2	5	3	0

2. (a)

①	②	①		
2	6	5	8	
2	3	6	3	
+ 1	7	9	8	
6	8	1	9	

(b)

①	①	①	②		
1	4	5	0	9	
2	8	8	2	6	
+ 3	0	3	7	8	
7	3	7	1	3	

3. (a)

	①	①		
	4	2	4	5
+	7	5	6	7
1	1	8	1	2

1	1	8	1	2	↑ Adding up
	4	2	4	5	
+	7	5	6	7	

(b)

①		①	①		
4	5	6	5	6	
+ 1	6	2	7	8	
6	1	9	3	4	

6	1	9	3	4	↑ Adding up
	4	5	6	5	6
+	1	6	2	7	8

(c)

①	①	①	①		
9	9	9	9	9	
+	8	8	8	8	
1	0	8	8	8	7

1	0	8	8	8	7 ↑ Adding up
	9	9	9	9	9
+		8	8	8	8

4. Number of bulb manufactured in first years: 76892

Number of bulb manufactured in second year: 31289

Total bulbs manfactured in 2 years: Bulb manufactured in first year + Bulb manufactured in second year

= 76892 + 31289

= 108181

Answer: 108181 bulbs were manufactured by the factory in 2 years.

Exercise 2.4

1. (a)

	9	5	rounds →	1	0	0
+	4	4	rounds →	+	4	0
1	3	9		1	4	0

Actual sum — Estimated sum

(b)

						①		
	4	3	6	1	rounds →	4	3	6	0
+	1	5	3	7	rounds →	+ 1	5	4	0
	5	8	9	8		5	9	0	0

Actual sum — Estimated sum

(c)

	4	4	9	0	2	rounds →	4	4	9	0	0
+	4	1	0	8	5	rounds →	+ 4	1	0	9	0
	8	5	9	8	7		8	5	9	9	0

Actual sum — Estimated sum

2. (a)

			①						
		9	5	6	rounds →	1	0	0	0
+		5	3	9	rounds →	+	5	0	0
	1	4	9	5		1	5	0	0

Actual sum — Estimated sum

(b)

			①						
		7	0	1	5	rounds →		7	0	0	0
+		6	6	7	8	rounds →	+	6	7	0	0
	1	3	6	9	3		1	3	7	0	0

Actual sum — Estimated sum

(c)

	2	1	7	0	3	rounds →	2	1	7	0	0
+	1	5	0	9	6	rounds →	+ 1	5	1	0	0
	3	6	7	9	9		3	6	8	0	0

Actual sum — Estimated sum

3. Capacity of water in tank: 3692*l*

Capaity of more water that can come in tank: 2457*l*

Capacity of tank: 3700*l* + 2500*l*

= 6200*l*

	①	①				①			
	3	6	9	2	rounds →	3	7	0	0
+	2	4	5	7	rounds →	+ 2	5	0	0
	6	1	4	9		6	2	0	0
	Actual sum					Estimated sum			

Answer: Rounded of capacity of water tank to the nearest 100 is 6200*l*.

Exercise 2.5

1. Number of people recorded from Covid-19 in January: 54986

Number of people recorded from Covid-19 february: 44567

Number of people recorded from Covid-19 in March: 35793

Total people recorded from Covid-19 in these 3 month

= Sum of total people recorded from Covid-19 in January, february and March

= 54986 + 44567 + 35793

= 135346

	①	②	②	①	
	5	4	9	8	6
	4	4	5	6	7
+	3	5	7	9	3
1	3	5	3	4	6

Answer: 135346 people were recorded from Covid-19 in Janurary, February and March

2. Money Withdrawl by Sahil on first day: ₹45, 500

Money Withdrawl by Sahil on Second day: ₹96, 500

Money Withdrawl by Sahil on third day: ₹63, 500

Total Money Withdrawl by Sahil: Sum of money Withdrawl on three consecutive days

= ₹45, 500 + ₹96, 500 + ₹63, 500 = ₹2,05,500

				₹		
		①	①			
	4	5	5	0	0	
	9	6	5	0	0	
+	6	3	5	0	0	
2	0	5	5	0	0	

Answer: Sahil Withdraw ₹205500 from bank in three consecutive days

3. Number of maths books: 4692

Number of Science: 6520

Number of English: 7145

Total Number of books: Sum of English, Science and Maths books

= 4692 + 6520 + 7145

= 18357

		①	①		
	4	6	9	2	
	6	5	2	0	
+	7	1	4	5	
1	8	3	5	7	

Answer: There are 18357 books is library.

4. Cost of Washing machine: ₹15830

Cost of Table: ₹2995

Cost of bed: ₹3750

(a) Cost of Washing machine and bed is ₹15830 + ₹3750

= ₹19580

			₹		
	①				
1	5	8	3	0	
+	3	7	5	0	
1	9	5	8	0	

Answer: Cost of washing machine and bed together is ₹19580

(b) Cost of Washing machine and table together: ₹15830 + ₹2995

= ₹18825

		₹			
		①	①		
	1	5	8	3	0
+		2	9	9	5
	1	8	8	2	5

Answer: Cost of Washing machine and table together is ₹18825

(c) Cost of bed and table together: ₹3750 + ₹2995

= ₹6745

		₹			
		①	①		
		3	7	5	0
+	2	9	9	5	
	6	7	4	5	

Answer: Cost of bed and table together is ₹6745.

(d) Cost of all three itemes: ₹15830 + ₹2995 + ₹3750

= ₹22575

		₹			
	①	②	①		
	1	5	8	3	0
		2	9	9	5
+		3	7	5	0
	2	2	5	7	5

Answer: Cost of all three items is ₹22575

Exercise 2.6

1. (a)

	4	8
−		1
	4	7

Answer: 48 − 1 = 47

(b)

	1	5	3
−			0
	1	5	3

Answer: 153 − 0 = 153

(c)

	2	4	3	4
−	2	4	3	4
	0	0	0	0

Answer: 2434 − 2434 = 0

2. (a) 2648 − 1326

2648 > 1326

2468 − 1326

1000 300 20 6

2648 − 1000 = 1648

1648 − 300 = 1348

1348 − 20 = 1328

1328 − 6 = 1322

So, 2648 − 1326 = 1322

(b) 298 − 168

298 > 168

298 − 168

100 60 8

298 − 100 = 198

198 − 60 = 138

138 − 8 = 130

So, 298 − 168 = 130

(c) 48 − 18

48 > 18

48 − 18

10 8

48 − 10 = 38

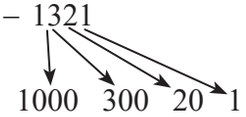
38 − 8 = 30

So, 48 − 18 = 30

3. (a) 4592 – 1321

4592 > 1321

4592 – 1321



4592 – 1000 = 3592

3592 – 300 = 3292

3292 – 20 = 3272

3272 – 1 = 3271

So, 4592 – 1321 = 3271

(b) 896 – 245

896 > 245

896 – 245

896 – 200 = 696

696 – 40 = 656

656 – 5 = 651

So, 896 – 245 = 651

(c) 54 – 43

54 > 43

54 – 43

54 – 40 = 14

14 – 3 = 11

So, 54 – 43 = 11

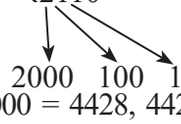
4. Total money with Ravi: ₹6428

Money spent on buying books: ₹2110

Money left with Ravi: Total money with Ravi – Money spent on buying books

= ₹6428 – ₹2110

= ₹6428 – ₹2110



6428 – 2000 = 4428, 4428 – 100 = 4328, 4328 – 10 = 4318

Answer: Money left with Ravi is ₹4318

Exercise 2.7

1. (a)

	5	6	9	0
–	3	0	2	0
	2	6	7	0

(b)

	9	7	7	6
–	3	4	6	2
	6	3	1	4

(c)

	5	6	9	1	7
–	2	3	4	1	2
	3	3	5	0	5

2. (a)

	4	8	7	8
–	2	7	3	6
	2	1	4	2

(b)

	5	6	9	3	4
–	4	2	6	1	3
	1	4	3	2	1

(c)

	4	5	8	2	7
–	1	3	5	2	4
	3	2	3	0	3

3. Total Bananas with fruit merchant: 89213kg

Bananas sold: 16200kg

Total number of left Bananas with merchant: Total Bananas – Bananas sold

89213kg – 16200kg = 73013kg

					kg
	8	9	2	1	3
–	1	6	2	0	0
	7	3	0	1	3

Answer: 73013 kg of Bananas were left with the fruit merchant.

Exercise 2.8

1. (a)

	⑦	⑰	⑤	⑭
	~~8~~	~~7~~	~~6~~	~~4~~
–	3	9	4	7
	4	8	1	7

(b)

	⑤	⑭	②	⑱	
	~~6~~	~~4~~	~~3~~	~~8~~	9
–		9	2	9	8
	5	5	0	9	1

(c)

	⑨	⑨	⑨	
④	~~10~~	~~10~~	~~10~~	⑩
~~5~~	~~0~~	~~0~~	~~0~~	~~0~~
–	8	6	8	7
4	1	3	1	3

2. (a)

		⑬	⑮	
	②	~~3~~	~~5~~	⑬
9	~~3~~	~~4~~	~~6~~	~~3~~
– 3	2	9	8	9
6	0	4	7	4

(b)

		⑮	⑨	
	⑥	~~5~~	~~10~~	⑩
7	~~7~~	~~6~~	~~0~~	~~0~~
– 4	3	9	9	8
3	3	6	0	2

(c)

	⑨	⑨	⑨	
⑧	~~10~~	~~10~~	~~10~~	⑩
~~9~~	~~0~~	~~0~~	~~0~~	~~0~~
– 3	7	6	5	4
5	2	3	4	6

3. (a)

	⑪	⑨	
②	~~1~~	~~10~~	⑭
~~3~~	~~2~~	~~0~~	~~4~~
– 1	6	5	8
1	5	4	6

(b)

	⑭	⑨	⑨	⑫	
⑥	~~4~~	~~10~~	~~10~~	~~2~~	⑫
~~7~~	~~5~~	~~0~~	~~0~~	~~3~~	~~2~~
–	5	8	7	6	5
6	9	1	2	6	7

(c)

	⑨	⑨	⑨	
⑤	~~10~~	~~10~~	~~10~~	⑩
~~6~~	~~0~~	~~0~~	~~0~~	~~0~~
– 1	4	9	6	2
4	5	0	3	8

Exercise 2.9

1. (a)

	⑥	⑯	
	~~7~~	~~6~~	rounds →
–	2	9	rounds →
	4	7	

Actual difference

	8	0
–	3	0
	5	0

Estimated difference

(b)

	4	4	4	rounds →
–	3	3	3	rounds →
	1	1	1	

Actual difference

	4	4	0
–	3	3	0
	1	1	0

Estimated difference

(c)

		⑮		
	①	~~5~~	⑬	
	~~2~~	~~6~~	~~3~~	4
–	1	6	8	2
	0	9	5	2

Actual difference

		⑮		
	①	~~5~~	⑬	
	~~2~~	~~6~~	~~3~~	0
–	1	6	8	0
		9	5	0

Estimated difference

(d)

	8	8	8	8
–	3	3	3	3
	5	5	5	5

Actual difference

	8	8	9	0
–	3	3	3	0
	5	5	6	0

Estimated difference

2. (a)

		⑥	⑬
	5	~~7~~	~~3~~
–	3	0	8
	2	6	5

Actual difference

	6	0	0
–	3	0	0
	3	0	0

Estimated difference

(b)

		⑬		
	⑥	~~3~~	⑬	
	~~7~~	~~4~~	~~3~~	
–	2	6	4	
	4	7	9	

Actual difference

	7	0	0
–	3	0	0
	4	0	0

Estimated difference

(c)

			⑫		
		⑥	~~2~~	⑫	
	3	~~7~~	~~3~~	~~2~~	
–	2	4	8	6	
	1	2	4	6	

Actual difference

	3	7	0	0
–	2	5	0	0
	1	2	0	0

Estimated difference

(d)

			⑬	⑪						
		⑥	~~3~~	~~1~~	⑯			⑥	⑭	
	3	~~7~~	~~4~~	~~2~~	~~6~~	rounds →	3	~~7~~	~~4~~	0	0
−	1	1	5	4	8	rounds →	− 1	1	5	0	0
	2	5	8	7	8			2	5	9	0	0
	Actual difference							Estimated difference				

Exercise 2.10

1. Production of fans by factory in 2020: 13452

Production of fans by factory in 2021: 20308

Increased production in Number of fans: Number of fans produced in 2021 – Number of fans produced in 2020

		⑨	⑫		
	①	~~10~~	~~2~~	⑩	
	~~2~~	~~0~~	~~3~~	~~0~~	8
−	1	3	4	5	2
	0	6	8	5	6

= 20308 – 13452

= 6856

Answer: Production in the number of fans in increased by 6856.

2. Total Number of bags: 35615

Number of bags sold: 7645

Number of bags left: Total bags – Bags sold

= 35615 – 7645

= 27970

		⑭	⑮		
	②	~~4~~	~~5~~	⑪	
	~~3~~	~~5~~	~~6~~	~~1~~	5
−		7	6	4	5
	2	7	9	7	0

Answer: 27970 bags of pulses are left in godown.

3. Cost of bike = ₹ 15700

Total Amount with Rihan = ₹13300

More amount needed to purchase the bike: Cost of bike – Amount with Rihan

= ₹15700 – ₹13300

= ₹2400

	1	5	7	0	0
−	1	3	3	0	0
	0	2	4	0	0

Answer: Rihan requires ₹2400 more to purchase the bike.

4. Total books in book shop: 5753

Number of books sold: 2730

Books left in the shop: Total books – Books sold

= 5753 – 2730

= 3023

	5	7	5	3
−	2	7	3	0
	3	0	2	3

Answer: The bookshop is left with 3023 books.

Exercise 2.11

1. (a)

		①							
	6	1	7			9	7	5	
+	3	5	8		−	2	3	4	
	9	7	5			7	4	1	

Answer: 617 + 358 – 234 = 741.

(b)

			①					⑧	⑪	
	5	2	4	3		8	8	~~9~~	~~1~~	
+	3	6	4	8	−	1	7	6	4	
	8	8	9	1		7	1	2	7	

Answer: 5243 + 3648 – 1764 = 7127

(c)

$$\begin{array}{r} 8\ 4\ 3\ 6 \\ -\ 2\ 4\ 2\ 6 \\ \hline 6\ 0\ 0\ 0 \end{array} \qquad \begin{array}{r} \overset{}{\ }\ \overset{9}{\ }\ \overset{9}{\ }\ \overset{}{\ } \\ \overset{5}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{10}{\ } \\ \not{6}\ \not{0}\ \not{0}\ \not{0} \\ -\ 1\ 5\ 4\ 3 \\ \hline 4\ 4\ 5\ 7 \end{array}$$

Answer: 8436 – 2436 + 1543 = 4457

(d)

$$\begin{array}{r} \overset{}{\ }\ \overset{6}{\ }\ \overset{15}{\ }\ \overset{}{\ } \\ 9\ \not{7}\ \not{5}\ 0 \\ -\ 2\ 4\ 8\ 0 \\ \hline 7\ 2\ 7\ 0 \end{array} \qquad \begin{array}{r} \overset{}{\ }\ \overset{}{\ }\ \overset{11}{\ }\ \overset{16}{\ } \\ \overset{6}{\ }\ \not{1}\ \not{6}\ \overset{10}{\ } \\ \not{7}\ \not{2}\ \not{7}\ \not{0} \\ -\ \ 9\ 7\ 5 \\ \hline 6\ 2\ 9\ 5 \end{array}$$

Answer: 9750 – 2480 – 475 = 6295

(e)

$$\begin{array}{r} 9\ 0\ 0\ 0 \\ -\ 4\ 5\ 0\ 0 \\ \hline 4\ 5\ 0\ 0 \end{array} \qquad \begin{array}{r} \overset{}{\ }\ \overset{}{\ }\ \overset{9}{\ }\ \overset{}{\ } \\ \overset{}{\ }\ \overset{4}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{10}{\ } \\ 4\ \not{5}\ \not{0}\ \not{0} \\ -\ 3\ 2\ 4\ 5 \\ \hline 1\ 2\ 5\ 5 \end{array}$$

Answer: 4500 – 3245 = 1255

2. (a)

$$\begin{array}{r} \overset{}{\ }\ \overset{1}{\ }\ \overset{}{\ }\ \overset{}{\ } \\ 3\ 7\ 2 \\ +\ 7\ 3\ 6\ 4 \\ \hline 7\ 7\ 3\ 6 \end{array}$$

(b)

$$\begin{array}{r} \overset{}{\ }\ \overset{1}{\ }\ \overset{1}{\ }\ \overset{1}{\ }\ \overset{}{\ } \\ 3\ 0\ 9\ 7\ 8 \\ +\ \ 1\ 5\ 4\ 5 \\ \hline 3\ 2\ 5\ 2\ 3 \end{array}$$

(c)

$$\begin{array}{r} \overset{3}{\ }\ \overset{16}{\ }\ \overset{}{\ }\ \overset{}{\ } \\ \not{4}\ \not{6}\ 9\ 5 \\ -\ \ 7\ 8\ 4 \\ \hline 3\ 9\ 1\ 1 \end{array}$$

(d)

$$\begin{array}{r} \overset{}{\ }\ \overset{}{\ }\ \overset{}{\ }\ \overset{4}{\ }\ \overset{10}{\ } \\ 8\ 3\ 6\ \not{5}\ \not{0} \\ -\ \ 2\ 5\ 4\ 3 \\ \hline 8\ 1\ 1\ 0\ 7 \end{array}$$

3. (a) To get the required number, we subtract 2785 from 6000.

$$\begin{array}{r} \overset{}{\ }\ \overset{9}{\ }\ \overset{9}{\ }\ \overset{}{\ } \\ \overset{5}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{10}{\ } \\ \not{6}\ \not{0}\ \not{0}\ \not{0} \\ -\ 2\ 7\ 8\ 5 \\ \hline 3\ 2\ 1\ 5 \end{array} \xrightarrow{\text{Checking}} \begin{array}{r} \overset{1}{\ }\ \overset{1}{\ }\ \overset{1}{\ }\ \overset{}{\ } \\ 2\ 7\ 8\ 5 \\ +\ 3\ 2\ 1\ 5 \\ \hline 6\ 0\ 0\ 0 \end{array}$$

3215 must be added to 2785 to get 6000.

(b) To get the required number, we subtract 736 from 4640.

$$\begin{array}{r} \overset{3}{\ }\ \overset{16}{\ }\ \overset{3}{\ }\ \overset{10}{\ } \\ \not{4}\ \not{6}\ \not{4}\ \not{0} \\ -\ \ 7\ 3\ 6 \\ \hline 3\ 9\ 0\ 4 \end{array} \xrightarrow{\text{Checking}} \begin{array}{r} \overset{1}{\ }\ \overset{}{\ }\ \overset{1}{\ }\ \overset{}{\ } \\ 3\ 9\ 0\ 4 \\ +\ 0\ 7\ 3\ 6 \\ \hline 4\ 6\ 4\ 0 \end{array}$$

3904 must be added to 736 to get 4640.

(c) To get the required number, we subtract 4537 from 87364.

$$\begin{array}{r} \overset{}{\ }\ \overset{6}{\ }\ \overset{13}{\ }\ \overset{5}{\ }\ \overset{14}{\ } \\ 8\ \not{7}\ \not{3}\ \not{6}\ \not{4} \\ +\ \ 4\ 5\ 3\ 7 \\ \hline 8\ 2\ 8\ 2\ 7 \end{array} \xrightarrow{\text{Checking}} \begin{array}{r} \overset{}{\ }\ \overset{1}{\ }\ \overset{}{\ }\ \overset{1}{\ }\ \overset{}{\ } \\ 0\ 4\ 5\ 3\ 7 \\ +\ 8\ 2\ 8\ 2\ 7 \\ \hline 8\ 7\ 3\ 6\ 4 \end{array}$$

82827 must be added to 4537 to get 87364.

(d) To get the required number, we subtract 5346 from 20000.

$$\begin{array}{r} \overset{}{\ }\ \overset{9}{\ }\ \overset{9}{\ }\ \overset{9}{\ }\ \overset{}{\ } \\ \overset{1}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{\not{1}\not{0}}{\ }\ \overset{10}{\ } \\ \not{2}\ \not{0}\ \not{0}\ \not{0}\ \not{0} \\ -\ \ 5\ 3\ 4\ 6 \\ \hline 1\ 4\ 6\ 5\ 4 \end{array} \xrightarrow{\text{Checking}} \begin{array}{r} \overset{1}{\ }\ \overset{1}{\ }\ \overset{1}{\ }\ \overset{1}{\ }\ \overset{}{\ } \\ 0\ 5\ 3\ 4\ 6 \\ +\ 1\ 4\ 6\ 5\ 6 \\ \hline 2\ 0\ 0\ 0\ 0 \end{array}$$

14654 must be added to 5346 to get 20000.

4. (a) To get the required number, we subtract 2714 from 83643 and then check the answer.

$$\begin{array}{r} \overset{}{\ }\ \overset{2}{\ }\ \overset{16}{\ }\ \overset{3}{\ }\ \overset{13}{\ } \\ 8\ \not{3}\ \not{6}\ \not{4}\ \not{3} \\ -\ \ 2\ 7\ 1\ 4 \\ \hline 8\ 0\ 9\ 2\ 9 \end{array} \xrightarrow{\text{Checking}} \begin{array}{r} \overset{}{\ }\ \overset{2}{\ }\ \overset{16}{\ }\ \overset{3}{\ }\ \overset{13}{\ } \\ 8\ \not{3}\ \not{6}\ \not{4}\ \not{3} \\ -\ 8\ 0\ 9\ 2\ 9 \\ \hline 0\ 2\ 7\ 1\ 4 \end{array}$$

80929 must be subtracted from 83643 to get 2714.

(b) To get the required number, we subtract 3772 from 60000 and the check the answer.

$$\begin{array}{r} \cancel{6}\ \cancel{0}\ \cancel{0}\ \cancel{0}\ \cancel{0} \\ -\quad 3\ 7\ 7\ 2 \\ \hline 5\ 6\ 2\ 2\ 8 \end{array}$$

Checking →

$$\begin{array}{r} \cancel{6}\ \cancel{0}\ \cancel{0}\ \cancel{0}\ \cancel{0} \\ -\ 5\ 6\ 2\ 2\ 8 \\ \hline 3\ 7\ 7\ 2 \end{array}$$

56228 must be subtract be from 60000 to get 3772.

(c) To get the required number we subtract 9999 from 55348 and then check the answer.

$$\begin{array}{r} \cancel{5}\ \cancel{5}\ \cancel{3}\ \cancel{4}\ \cancel{8} \\ -\quad 9\ 9\ 9\ 9 \\ \hline 4\ 5\ 3\ 4\ 9 \end{array}$$

Checking →

$$\begin{array}{r} \cancel{5}\ \cancel{5}\ \cancel{3}\ \cancel{4}\ \cancel{8} \\ -\ 4\ 5\ 3\ 4\ 9 \\ \hline 0\ 9\ 9\ 9\ 9 \end{array}$$

45349 must be subtract from 55348 to get 9999.

(d) To get the required number, we subtract 4761 from 8736 and then check the answer.

$$\begin{array}{r} \cancel{8}\ \cancel{7}\ \cancel{3}\ 6 \\ -\ 4\ 7\ 6\ 1 \\ \hline 3\ 9\ 7\ 5 \end{array}$$

Checking →

$$\begin{array}{r} \cancel{8}\ \cancel{7}\ \cancel{3}\ 6 \\ -\ 3\ 9\ 7\ 5 \\ \hline 4\ 7\ 6\ 1 \end{array}$$

3975 must be subtracted from 8736 to get 4761.

5. Capacity of Eden Gardens stadium: 65507

Number of people entered before noon: 15942

Number of people entered after noon: 14940

Total number of people entered: People entered before noon + People entered after noon

$$\begin{array}{r} 1\ 5\ 9\ 4\ 2 \\ +\ 1\ 4\ 9\ 4\ 0 \\ \hline 3\ 0\ 8\ 8\ 2 \end{array}$$

= 15942 + 14940

= 30882 people

Number of people in the field till it is filled to its capacity: Capacity of stadium – Total number of people entered

$$\begin{array}{r} 6\ \cancel{5}\ \cancel{5}\ \cancel{0}\ 7 \\ -\ 3\ 0\ 8\ 8\ 2 \\ \hline 3\ 4\ 6\ 2\ 5 \end{array}$$

= 65507 – 30882

= 34625

Answer: 34625 people can enter field till it is filled to capacity.

6. Number of both ladies and gents visited the Book fair: 10250

Number of gents visited the Book fair: 4275

Number of ladies visited the book fair:

Number of ladies and gents visited the book fair – Number of gents visited the book fair.

$$\begin{array}{r} \cancel{1}\ \cancel{0}\ \cancel{2}\ \cancel{5}\ \cancel{0} \\ -\quad 4\ 2\ 7\ 5 \\ \hline 5\ 9\ 7\ 5 \end{array}$$

= 10250 – 4275

= 5975

Answer: 5975 ladies visited the book fair.

7. Total number of bags in the godown: 19345

Number of bags taken out on Monday: 6678

Number of bags taken out on Tuesday: 3241

Total number of bags taken out: Bags taken out on Monday + Bags taken out on Tuesday

$$\begin{array}{r} 6\ 6\ 7\ 8 \\ +\ 3\ 2\ 4\ 1 \\ \hline 9\ 9\ 1\ 9 \end{array}$$

= 6678 + 3241

= 9919 bags

Number of wheat bags remaining in the godown: Total number of bags in the godown – Total Number of bags taken out.

	⑱			
	~~8~~	⑬	③	⑮
	~~1~~	~~9~~	~~3~~	~~4~~	~~5~~
–		9	9	1	9
		9	4	2	6

= 19345 – 9919

= 9426

Answer: 9426 bags of wheat remain in the godown.

8. Total length of the thread = 20000m

Length of the first cutted piece = 7235m

Length of the second cutted piece = 3455m

Total length of the two cutted piece: Length of first cutted piece + Length of second cutted piece

m				
		①		
	7	2	3	5
+	3	4	5	5
1	0	6	9	0

= 7235m + 3455m

= 10690

Lenght of remaining thread: Total length of the thread – Length of the cutted pieces

m				
		⑨	⑨	⑨
	①	~~10~~	~~10~~	~~10~~	⑩
	~~2~~	~~0~~	~~0~~	~~0~~	~~0~~
–	1	0	6	9	0
	0	9	3	1	0

= 20000m – 10690m

= 9310m

Answer: Length of the remaining thread is 9310m.

Learning Updates

1. (a)

	①	①		①	
		5	7	3	6
+	5	9	3	2	6
	6	5	0	6	2

(b)

	①	①			
	6	3	3	6	4
+	1	8	7	2	3
	8	2	0	8	7

(c)

	①	①			
	2	5	6	7	6
+	1	9	4	2	3
	4	5	0	9	9

2. (a)

	9	8	7	5	0
–	5	6	3	4	0
	4	2	4	1	0

(b)

		⑭	⑮	⑬	
	⑦	~~4~~	~~5~~	~~3~~	⑩
	~~8~~	~~5~~	~~6~~	~~4~~	~~0~~
–	3	6	9	5	5
	4	8	6	8	5

(c)

	②	⑬			
	~~3~~	~~3~~	9	6	4
–	2	8	7	5	3
	0	5	2	1	1

3. (a)

		①	①	①	②	
	6	0	4	4	7	9
		1	7	3	2	8
+		2	4	5	3	6
	6	4	6	3	4	3

(b)

	①	②	①	①	
2	4	3	6	4	8
5	1	6	9	3	2
+		7	9	6	4
7	6	8	5	4	4

4. (a)

		⑨		
	⑥	~~10~~	⑭	
8	~~7~~	~~0~~	~~4~~	6
– 5	3	2	6	4
3	3	7	8	2

(b)

		⑨		
	④	~~10~~	⑯	
9	~~5~~	~~0~~	~~6~~	2
– 8	2	0	7	0
1	2	9	9	2

5. Number of men in the area: 45983

Number of women in the area: 22847

Number of children in the area: 7085

Total population of the area: Number of men + Number of women + Number of children

①	①	②	①	
4	5	9	8	3
2	2	8	4	7
+	7	0	8	5
7	5	9	1	5

= 45983 + 22847 +7085

= 75915

Answer: 75915 is the total population of the area.

6. To get the required number we must subtract 17855 from 40099.

	⑨			
③	~~10~~	⑩		
~~4~~	~~0~~	~~0~~	9	9
– 1	7	8	5	5
2	2	2	4	4

Checking →

①	①			
1	7	8	5	5
+ 2	2	2	4	4
4	0	0	9	9

22244 must be added to 17855 to get 40099.

7. To get the required number we subtract 7699 from 42060 and then check the answer.

		⑨	⑮	
③	⑪	~~10~~	~~5~~	⑩
~~4~~	~~2~~	~~0~~	~~6~~	~~0~~
–	7	6	9	9
3	4	3	6	1

Checking →

		⑨	⑮	
③	⑪	~~10~~	~~5~~	⑩
~~4~~	~~2~~	~~0~~	~~6~~	~~0~~
– 3	4	3	6	1
	7	6	9	9

34361 must be subtract from 42060 to get 7699.

8. Sum of two number: 90613

first number: 58734

To get the second number we must subtract the first number from the sum of two numbers.

	⑨	⑮	⑩	
⑧	~~10~~	~~5~~	~~0~~	⑬
~~9~~	~~0~~	~~6~~	~~1~~	~~3~~
– 5	8	7	3	4
3	1	8	7	9

= 90613 – 58734

= 31789

Answer: The second number is 31879

Multiple choice Questions

1. (a)

5	0	0	0	
			0	
+			2	8
5	0	2	8	

Answer: (c) 5028

2.

	①	①	①	
	6	5	6	7
	9	8	4	5
–		3	7	3
1	6	7	8	5

Answer: (d) 16785

3.

	9	0	9	5
–	3	0	0	2
	6	0	9	3

Answer: (d) 6093

4. To get the remaining seats we must subtract booked seats from the total seats in the movie hall: 2620 – 1845

= 775

		⑮	⑪	
	①	~~5~~	~~1~~	⑩
	~~2~~	~~6~~	~~2~~	~~0~~
–	1	8	4	5
	0	7	7	5

Answer: (b) 775

Skills Check

(a)

	①	①			
	2	3	6	4	4
+	5	6	4	2	3
	8	0	0	6	7

(b)

		⑨			
	⑦	~~1~~~~0~~	⑩	③	⑬
	~~8~~	~~0~~	~~0~~	~~4~~	~~3~~
–	2	9	7	3	8
	5	0	3	0	5

3 Multiplication

Get Started

(a)

	₹	
	2	2
×		6
1	3	2

= ₹132

(b)

		₹	
		(9)	
		4	5
×		1	3
	1	3	5
+	4	5	×
	5	8	5

= ₹585

(c) 1 sandwich = ₹30

20 sandwiches = 20 × ₹30 = ₹600

		₹	
		3	0
×		2	0
		0	0
+	6	0	×
	6	0	0

(d) Total number of cream rolls: 25

Cost of each cream roll: 25

Total cost of cream rolls: Total number of cream rolls × Cost of each cream roll

= 25 × ₹25

= ₹625

Answer: Cream rolls: 25 × ₹25 = ₹625

		₹	
		(2)	
		2	5
×		2	5
	1	2	5
+	5	0	×
	6	2	5

Total = Cost of ballons + Cost of pastries + Cost of Sandwiches + Cost of Cream rolls

= ₹132 + ₹585 + ₹600 + ₹625

= ₹1942

			₹
		(1)	(1)
	1	3	2
	5	8	5
	6	0	0
+	6	2	5
1	9	4	2

Exercise 3.1

1. (a) 121 × 1 = (121) (The product of a number by 1 is the number itself).

(b) 3241 × (0) (The product aof a number by 0 is always 0)

(c) 35 × 165 = 165 × (35) (Order property)

(d) 169 × (115) = 115 × 169 (Order property)

(e) 62 × (45 × 49) = (62 × 45) × 49 (Grouping property)

(f) 102 × (100 + 35) = (102 × (100)) + (102 × 35)

(Distributive property of multiplication over addition).

2.

	Column A	Column B
(a)	2 × (4 × 6) or (2 × 4) × 6	Grouping property of multiplication
(b)	2 × 9 = 18 or 9 × 2 = 18	Order property of multiplication
(c)	5 × (50 + 3) = 5 × 50 + 5 × 3	Distributive property of multiplication over addition
(d)	**16** × 0 = 0	Multiplicative property of 0
(e)	18 × 1 = 18 or 1 × 18 = 18	Multiplicative property of 1

Exercise 3.2

1. (a)

		(2)	(3)	
		3	4	5
×				6
	2	0	7	0

(b)

(2)	(1)		
	2	8	6
×			3
	8	5	8

(c)

		(2)	(3)	
		7	3	5
×				6
	4	4	1	0

(d)

		(3)	
	1	0	4
×			9
	9	3	6

(e)

			(1)	(1)	
		6	2	4	3
×					4
	2	4	9	7	2

(f)

(1)	(1)	(2)		
1	3	4	7	
×				3
4	0	4	1	

(g)

		(5)	(6)	
	9	0	7	9
×				7
6	3	5	5	3

(h)

	9	8	4	7
×				0
	0	0	0	0

2. (a) (2) (1)

1	3	2	× 9 = 1188

(b) (3) (2)

5	7	6	× 4 = 2304

(c) (5) (7)

2	6	9	× 8 = 2152

(d) (1) (1)

3	3	4	1	× 3 = 10023

(e) (4) (4) (2)

1	6	6	4	× 7 = 11648

(f) (1) (6)

2	0	1	7	× 9 = 18153

3. (a)

300	10	4	
900	30	12	3

900 + 30 + 12 = 942

Answer: 314 × 3 = 942

(b)

200	50	5	
1000	250	25	3

1000 + 250 + 25 = 1275

Answer: 255 × 5 = 1275

(c)

200	20	6	
800	80	24	3

800 + 80 + 24 = 904

Answer: 226 × 4 = 904

(d)

7000	200	70	1	
4200	1200	420	6	6

42000 + 1200 + 420 + 6 = 43626

Answer: 7271 × 6 = 433626

(e)

1000	600	30	5	
6000	3600	180	30	6

6000 + 3600 + 180 + 30 = 9810

Answer: 1635 × 6 = 9810

(f)

5000	800	60	3	
10000	1600	120	6	2

10000 + 1600 + 120 + 6 = 11726

Answer: 5863 × 2 = 11726

4. Money spent for purchasing 1 cartoon = ₹7291

Money required for purchasing 12 Cartoons = ₹7291 × 12

= ₹87492

$$\begin{array}{rccccc} & & (1) & & & \\ & & 7 & 2 & 9 & 1 \\ \times & & & & 1 & 2 \\ \hline & (1) & & & & \\ & 1 & 4 & 5 & 8 & 2 \\ + & 7 & 2 & 9 & 1 & \times \\ \hline & 8 & 7 & 4 & 9 & 2 \end{array}$$

Answer: ₹87492 is required to purchase 12 such cartoons.

5. Cost of 1 mobile phone: ₹8395

Cost of such 7 mobile phones: ₹8395 × 7 = ₹58765

			₹		
		(2)	(6)	(3)	
		8	3	9	5
×					7
	5	8	7	6	5

Answer: ₹58765 would be the cost of such 7 mobile phones.

Exercise 3.3

1. (a) 47 × 10 = 470 (Multiplying a number by a 2-digit number ending with 0, we write 0 in the ones place and multiply the number by the digit in the tens place)

(b) 278 × 10 = 2780 (Multiplying a number by a 2-digit number ending with 0, we write 0 in the ones place and multiply the number by the digit in the tens place)

(c) 2413 × 10 = 24130 (Multiplying a number by a 2-digit number ending with 0, we write 0 in the ones place and multiply the number by the digit in the tens place)

(d) 93 × 10 = 930 (Multiplying a number by a 2-digit number ending with 0, we write 0 in the ones place and multiply the number by the digit in the tens place)

(e) 246 × 10 = 2460 (Multiplying a number by a 2-digit number ending with 0, we write 0 in the ones place and multiply the number by the digit in the tens place)

(f) 43 × 50 = 2150

$$\begin{array}{rcccc} & & & (1) & \\ & & & 4 & 3 \\ \times & & & 5 & 0 \\ \hline & & & 0 & 0 \\ + & 2 & 1 & 5 & \times \\ \hline & 2 & 1 & 5 & 0 \end{array}$$

2. (a)

$$\begin{array}{rcccc} & & (2) & & \\ & & (2) & & \\ & & 3 & 4 & \\ \times & & 5 & 5 & \\ \hline & 1 & 7 & 0 & \\ + & 1 & 7 & 0 & \times \\ \hline & 1 & 8 & 7 & 0 \end{array}$$

(b)

$$\begin{array}{rcccc} & & (1) & & \\ & & (4) & & \\ & & 7 & 8 & \\ \times & & 2 & 5 & \\ \hline & (1) & & & \\ & 3 & 9 & 0 & \\ + & 1 & 5 & 6 & \times \\ \hline & 1 & 9 & 5 & 0 \end{array}$$

(c)

$$\begin{array}{rccc} & & 4 & 3 \\ \times & & 1 & 0 \\ \hline & & 9 & 0 \\ + & 4 & 0 & \times \\ \hline & 4 & 9 & 0 \end{array}$$

(d)

		(1)		
		2	4	1
×			2	7
	(1)	(1)		
	1	6	8	7
+	4	8	2	×
	6	5	0	7

(e)

				(1)	
				(1)	
			4	0	2
×				5	9
		3	6	1	8
+	2	0	1	0	×
	2	3	7	1	8

(f)

		(3)	(2)	
		5	4	3
×			1	8
	4	3	4	4
+	5	4	3	×
	9	7	7	4

3. (a)

	(1)		
	1	2	
×		1	5
		6	0
+	1	2	×
	1	8	0

(b)

		(3)	(3)		
		(3)	(2)		
			1	6	5
×				6	5
		(1)			
			8	2	5
+		9	9	0	×
	1	0	7	2	5

(c)

			(5)	
			(2)	
		4	0	8
×			7	3
		1	2	2	4
+	2	8	5	6	×
	2	9	7	8	4

(d)

			(1)	(2)	(2)	
			(1)	(1)	(1)	
			2	3	5	4
×					5	3
		(1)				
			7	0	6	2
+	1	1	7	7	0	×
	1	2	4	7	6	2

4. Price of 1 litre petrol: ₹101

Price of 30 litres petrol = ₹101 × 30

= ₹3030

		₹		
		1	0	1
×			3	0
		0	0	0
+	3	0	3	×
	3	0	3	0

Answer: Price of 30 litres petrol is ₹3030.

5. Cost of 1 encyclopedia: ₹849

Cost of 12 encyclopedias: ₹849 × 12

= ₹10188

			₹	
			(1)	
		8	4	9
×			1	2
	(1)	(1)		
	1	6	9	8
+		8	4	9	×
	1	0	1	8	8

Answer: Cost of 12 encyclopedias will be ₹10188.

Exercise 3.4

1. (a) 31 × 100 = (3100) (To multi;y a number by a 3-digit number ending with two 0s, we write two 0s (00) at the end at tens and ones places and multiply the number by the digit in the hundreds place.)

(b) 199 × 100 = (19900) (To multiply a number by a 3-digit number ending with two 0s, we write two 0s (00) at the end at tens and ones places and multiply the number by the digit in the hundreds place.)

(c) 58 × (100) = 5800 (To multiply a number by a 3-digit number ending with two 0s, we write two 0s (00) at the end and ones places and multiply the number by the digit in the hundreds place.)

(d) (229) × 100 = 22900 (To multiply a number by a 3-digit number ending with two 0s, we write two 0s (00) at the end and ones places and multiply the number by the digit in the hundreds place.)

(e) 36 × 200 = 7200 (To multily a number by a 3-digit number ending with two 0s, we write two 0s (00) at the end at tens and ones places and multiply the number by the digit in the hundreds place.)

(f) 172 × 200 = 34400 (To multily a number by a 3-digit number ending with two 0s, we write two 0s (00) at the end at tens and ones places and multiply the number by the digit in the hundreds place.)

			(1)	
			3	6
×		2	0	0
			0	0
		0	0	×
+	7	2	×	×
	7	2	0	0

			(1)		
			1	7	2
×			2	0	0
				0	0
		0	0	0	×
+	3	4	4	×	×
	3	4	4	0	0

2. (a)

		(1)	(2)		
		(3)	(5)		
		1	4	8	
×		3	1	7	
		(1)			
	1	0	3	6	
	1	4	8	×	
+	4	4	4	×	×
	4	6	9	1	6

Answer: 148 × 317 = 46916

(b)

		(4)			
		(5)			
		2	6	1	
×		1	8	9	
	(1)	(1)			
	2	3	4	9	
2	0	8	8	×	
+	2	6	1	×	×
	4	9	3	2	9

Answer: 261 × 189 = 49329

(c)

			(1)	(2)	
			(3)	(3)	
			1	4	5
×			1	4	7
		(1)	(1)		
		1	0	1	5
		5	8	0	×
+	1	4	5	×	×
	2	1	3	1	5

Answer: 145 × 147 = 21315

(d)

			(1)	(2)	
			(2)	(4)	
			3	2	5
×			1	4	9
		(1)			
		2	9	2	5
	1	3	0	0	×
+	3	2	5	×	×
	4	8	4	2	5

Answer: 325 × 149 = 48425

(e)

					(2)	
					(1)	
				7	0	9
×				3	1	2
			(1)	(1)	(1)	
				1	4	1	8
				7	0	9	×
+	2	1	2	7	×	×
	2	2	1	2	0	8

Answer: 709 × 312 = 221208

(f)

			(1)	(1)	
			1	3	2
×			1	6	0
		(1)	(1)		
			0	0	0
		7	9	2	×
+	1	3	2	×	×
	2	1	1	2	0

Answer: 132 × 160 = 21120

3. (a)

			(4)	(5)	
			(1)	(1)	
			2	4	6
×			1	9	3
		(1)			
			7	3	8
	2	2	1	4	×
+	2	4	6	×	×
	4	7	4	7	8

(b)

					(2)	
					(5)	
				9	0	7
×				3	0	8
			7	2	5	6
			0	0	0	×
+	2	7	2	1	×	×
	2	7	9	3	5	6

(c)

			(4)			
			(4)			
			7	7	0	
×			7	6	0	
		(1)				
			0	0	0	
		4	6	2	0	×
+	5	3	9	0	×	×
	5	8	5	2	0	0

(d)

			(1)			
			(4)			
			(2)			
			8	7	1	
×			2	6	3	
	(1)		(1)			
			2	6	1	3
		5	2	2	6	×
+	1	7	4	2	×	×
	2	2	9	0	7	3

4. Number of Jams produced by the factory daily: 238

			(1)	(2)		
			(2)	(4)		
			(2)	(4)		
			2	3	8	
×			3	6	6	
		(1)	(1)			
		1	4	2	8	
	1	4	2	8	×	
+	7	1	4	×	×	
	8	7	1	0	8	

Number of days in a leap year: 366

Jams will be produced in a leap year: Jams produced daily × Total days in a leap year

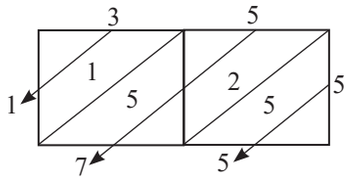
= 238 × 366

= 87108

Answer: 87108 jams will be produced by the factory in a leap year.

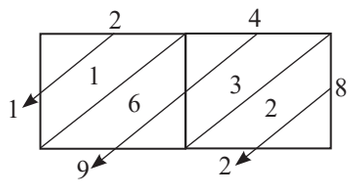
Exercise 3.5

1. (a)



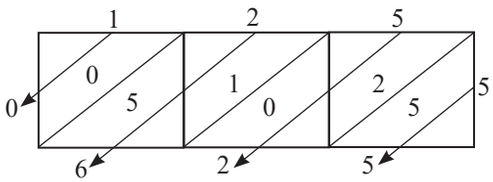
Answer: 35 × 5 = 175

(b)



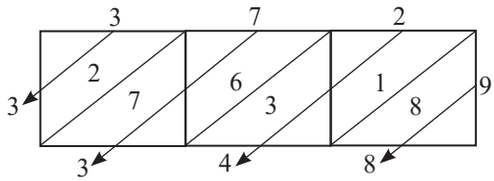
Answer: 24 × 8 = 192

(c)



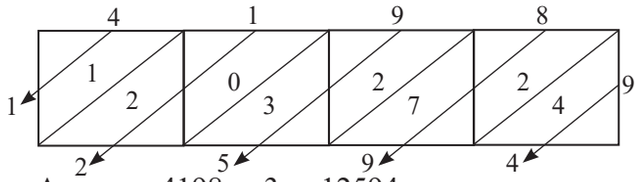
Answer: 125 × 5 = 625

(d)



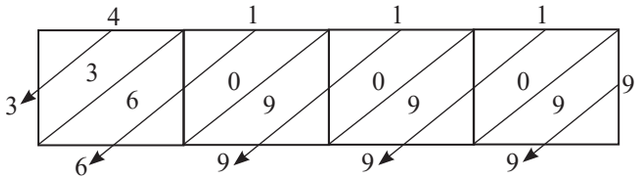
Answer: 372 × 9 = 3348

(e)



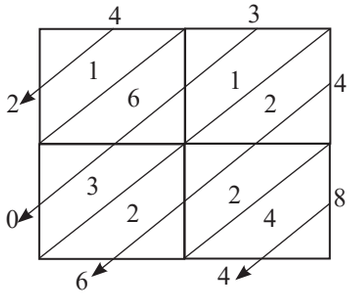
Answer: 4198 × 3 = 12594

(f)



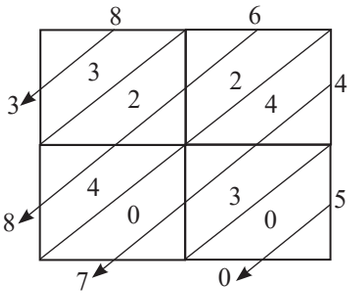
Answer: 4111 × 9 = 36999

2. (a)



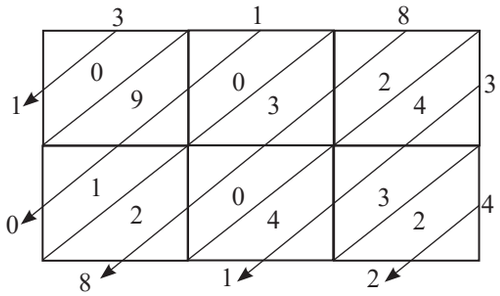
Answer: 43 × 48 = 2064

(b)



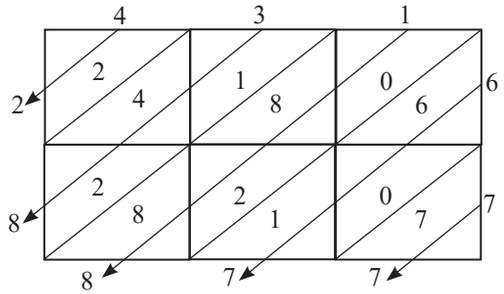
Answer: 86 × 45 = 3870

(c)



Answer: 318 × 34 = 10812

(d)



Answer: 43 × 67 = 28877

Exercise 3.6

1. (a) 14 × 48
14 rounds upto 10
48 rounds upto 50

	1	0	
×	5	0	
	0	0	
+ 5	0	×	
5	0	0	

(b) 75 × 44
75 rounds upto 80
44 rounds upto 40

		8	0	
×		4	0	
		0	0	
+ 3	2	0	×	
3	2	0	0	

(c) 44 × 14
44 rounds upto 40
14 rounds upto 10

	4	0	
×	1	0	
	0	0	
+ 4	0	×	
4	0	0	

(d) 397 × 36
397 rounds upto 400
36 rounds upto 40

		4	0	0	
×			4	0	
		0	0	0	
+ 1	6	0	0	×	
1	6	0	0	0	

(e) 154 × 81
154 rounds upto 150
46 rounds upto 50

		(4)			
		1	5	0	
×			8	0	
		0	0	0	
+ 1	2	0	0	×	
1	2	0	0	0	

(d) 273 × 46
273 rounds upto 270
81 rounds upto 80

		(3)		
		2	7	0
×			5	0
		0	0	0
+ 1	3	5	0	×
1	3	5	0	0

2. (a) 109 × 266

109 rounds upto 100

266 rounds upto 300

			1	0	0	
×			3	0	0	
			0	0	0	
		0	0	0	×	
+	3	0	0	×	×	
	3	0	0	0	0	

(b) 889 × 464

889 rounds upto 900

464 rounds upto 500

				9	0	0
×				5	0	0
				0	0	0
			0	0	0	×
+	4	5	0	0	×	×
	4	5	0	0	0	0

(c) 176 × 258

176 rounds upto 200

258 rounds upto 300

			2	0	0	
×			3	0	0	
			0	0	0	
		0	0	0	×	
+	6	0	0	×	×	
	6	0	0	0	0	

(d) 190 × 626

190 rounds upto 200

626 rounds upto 600

				2	0	0
×				6	0	0
				0	0	0
			0	0	0	×
+	1	2	0	0	×	×
	1	2	0	0	0	0

(e) 235 × 778

235 rounds upto 200

778 rounds upto 800

				2	0	0
×				8	0	0
				0	0	0
			0	0	0	×
+	1	6	0	0	×	×
	1	6	0	0	0	0

(f) 204 × 220

204 rounds upto 200

220 rounds upto 200

		2	0	0	
×		2	0	0	
		0	0	0	
	0	0	0	×	
+	4	0	0	×	×
	4	0	0	0	0

3. Total number of pen set varun is buying: 1930

Cost of each pen: 190

Estimated value Varun should carry: Estimated value of total number of pen set × Estimated cost of each pen

1930 rounds upto 1900

190 rounds upto 200

= 1900 × 200

= 380000

			(1)			
			1	9	0	0
×				2	0	0
			0	0	0	0
		0	0	0	0	×
+	3	8	0	0	×	×
	3	8	0	0	0	0

Answer: Varun should carry an estimate of ₹380000

Exercise 3.7

1. Total number of books a drawer can hold: 353

Total number of drawers: 234

Total number of books can be kept in 234 drawers: Total number books in a drawer × Total number of drawers

= 353 × 234

= 82602

	(1)	(1)		
	(2)	(1)		
		3	5	3
×		2	3	4
	(1)	(1)		
	1	4	1	2
1	0	5	9	×
+ 7	0	6	×	×
8	2	6	0	2

Answer: 82602 books can be kept in 234 drawers.

2. Number of pasenger can sit in a car: 8

Total number of cars: 435

Total number of pasenger can sit in 435 such cars: Number of passenger can sit in car × Total number of cars

= 8 × 435

= 3480

Answer: 3480 passengers can sits in 435 such cars.

		(2)	(4)	
		4	3	5
×				8
	3	4	8	0

3. Total amount of wheat a bag can contain: 38 kg

Number of bags: 25

Amount of wheat 25 bags can contain: Amount of wheat 1 bag can contain × Number of bags

= 38 kg × 25

= 950 kg

			kg
		(1)	
		(4)	
		3	8
×		2	5
	(1)		
	1	9	0
+	7	6	×
	9	5	0

Answer: 25 bags can contain 950 kg of wheat.

4. Company price of a table fan: ₹553

Number of fans dealer buys: 135

Money dealer has to pay the company: Price of a table fan × Number of fans

= ₹553 × 135

= ₹74655

				₹
			(1)	
		(2)	(1)	
		5	5	3
×		1	3	5
	(1)	(1)	(1)	
	2	7	6	5
1	6	5	9	×
+ 5	5	3	×	×
7	4	6	5	5

Answer: Dealer has to pay ₹74655 to the company.

5. (a) Cost of 1 kg of Gvava: ₹78

Cost of 5 kg of Gvava: ₹78 × 5

= ₹390

	₹		
		(4)	
		7	8
×			5
	3	9	0

Cost of 1kg of pears: ₹85

Cost of 3kg of pears: ₹85 × 3

= ₹255

	₹		
		(1)	
		8	5
×			3
	2	5	5

Cost of 5 kg of Gvava and 3 kg of pears: ₹390 + ₹255

= ₹645

	(1)		
	3	9	0
+	2	5	5
	6	4	5

Answer: Cost of 5kg of Gvava and 3kg of pears together is ₹645

(b) Cost of 1 kg of strawberries: ₹45

Cost of 8 kg of strawberries: ₹45 × 8 = ₹360

	₹		
		(4)	
		4	5
×			8
	3	6	0

Cost of 1kg of Oranges: ₹120

Cost of 4 kg of Oranges: ₹120 × 4

= ₹480

	₹		
	1	2	0
×			4
	4	8	0

Cost of 8kg of strawberries and 4kg of Oranges: ₹360 + ₹480 = ₹840

Answer: Cost of 8kg of strawberries and 4kg of oranges is ₹840.

(c) Cost of 2kg of Oranges: 2 × ₹120 = ₹240

Cost of 2kg of Pears: 2 × ₹85 = ₹170

Cost of 2 kg of Guavas: 2 × ₹78 = ₹156

Cost of 2kg of Strawberries: 2 × ₹45 = ₹90

Cost of 2kg of each item: ₹240 + ₹170 + ₹156 + ₹90

= ₹656

	₹		
	(1)		
	2	4	0
	1	7	0
	1	5	6
+		9	0
	6	5	6

Answer: Cost of 2kg of each item is ₹656

(d) Total money Rihana gave to the shopkeeper:₹ 2000

Cost of 2kg of Oranges: 2 × ₹120 = ₹240

Cost of 3kg of Strawberries: 3 × ₹45 = ₹135

Cost of 3kg of Gvava: ₹78

Total cost of items Rihan purchased: Cost of 2kg Oranges + Cost of 2kg Strawberries + 2kg of Gvava

= ₹240 + ₹135 + ₹78

= ₹453

	₹		
	(1)	(1)	
	2	4	0
	1	3	5
+		7	8
	4	5	3

Total money Shopkeeper will return to Rihana

Money given by Rihana to Shopkeeper – Total Cost of items Rihana purcased

= ₹2000 – ₹453

= ₹1547

		₹		
		(9)	(9)	
	(1)	~~10~~	~~10~~	(10)
	~~2~~	~~0~~	~~0~~	~~0~~
–		4	5	3
	1	5	4	7

Answer: Shopkeeper has to return ₹1547 to Rihana

Learning Updates

1. (a) 4 × 3 = (3) × 4 (Order property)

(b) 13 × (45) = 45 × 13 (Order property)

(c) 90 × 0 = (0) (The product of a number by 0 is always 0)

2. (a) (902) ×10 = 9020

(b) 45 × 100 = (4500)

(c) 345 × (1000) = 345000

3. (a) 12 × 10 = 120

(b) 20 × 40 = 800

		2	0
×		4	0
		0	0
+	8	0	×
	8	0	0

(c) 116 × 70 = 8120

		(1)	(4)	
		1	1	6
×			7	0
		0	0	0
+	8	1	2	×
	8	1	2	0

4. (a) 25 × 500

= (25 × 5) × 100 = 125 × 100 = 12500

(b) 234 × 700 (7 × 100)

(234 × 7) × 100 = 163800

		(2)	(2)	
		2	3	4
×				7
	1	6	3	8

(c) 264 × 800 (8 × 100)

(264 × 8) × 100 = 211200

		(1)	(3)	
		2	6	4
×				8
	2	1	1	2

5. (a)

		1	0	2
×			4	2
		2	0	4
+	4	0	8	×
	4	2	8	4

Answer: 102 × 42 = 4284.

(b)

			(1)	
		(1)	(2)	
		1	2	3
×			4	8
	(1)	(1)		
		9	8	4
+	4	9	2	×
	5	9	0	4

Answer: 123 × 48 = 5904

(c)

$$\begin{array}{r} \overset{}{}\ \overset{}{}\ \overset{(5)}{5}\ \overset{(5)}{5}\ \\ \ \ 2\ 7\ 8 \\ \times\ \ \ \ 7\ 1 \\ \hline \ \ \overset{(1)}{}\ \ \\ \ \ 2\ 7\ 8 \\ +\ 1\ 9\ 4\ 6\ \times \\ \hline 1\ 9\ 7\ 3\ 8 \end{array}$$

Answer: 278 × 71 = 19738

(d)

$$\begin{array}{r} \overset{}{}\ \overset{(2)}{}\ \overset{(3)}{}\ \overset{(4)}{}\ \\ \ \overset{(2)}{}\ \overset{(2)}{}\ \overset{(3)}{}\ \\ \ \ 1\ 3\ 4\ 5 \\ \times\ \ \ \ \ 8\ 6 \\ \hline \ \overset{(1)}{}\ \ \ \ \\ \ \ 8\ 0\ 7\ 0 \\ +\ 1\ 0\ 7\ 6\ 0\ \times \\ \hline 1\ 1\ 5\ 6\ 7\ 0 \end{array}$$

Answer: 1345 × 86 = 115670

(e)

$$\begin{array}{r} \overset{}{}\ \overset{(7)}{}\ \overset{(6)}{}\ \overset{(5)}{}\ \\ \ \overset{(5)}{}\ \overset{(5)}{}\ \overset{(4)}{}\ \\ \ \ 2\ 9\ 8\ 7 \\ \times\ \ \ \ \ 8\ 6 \\ \hline \ \overset{(1)}{}\ \overset{(1)}{}\ \ \ \\ \ \ 1\ 7\ 9\ 2\ 2 \\ +\ 2\ 3\ 8\ 9\ 6\ \times \\ \hline 2\ 5\ 6\ 8\ 8\ 2 \end{array}$$

Answer: 2987 × 86 = 256882.

(f)

$$\begin{array}{r} \overset{}{}\ \overset{(6)}{}\ \overset{(2)}{}\ \overset{(8)}{}\ \\ \ \ 3\ 7\ 2\ 9 \\ \times\ \ \ \ 9\ 1 \\ \hline \ \ \overset{(1)}{}\ \ \\ \ \ 3\ 7\ 2\ 9 \\ +\ 3\ 3\ 5\ 6\ 1\ \times \\ \hline 3\ 3\ 9\ 3\ 3\ 9 \end{array}$$

Answer: 3729 × 91 = 339339.

6. (a)

$$\begin{array}{r} \overset{}{}\ \overset{}{}\ \overset{(2)}{}\ \overset{(1)}{}\ \\ \ \ 1\ 3\ 2 \\ \times\ \ \ 1\ 1\ 8 \\ \hline \ \ 1\ 0\ 5\ 6 \\ \ \ 1\ 3\ 2\ \times \\ +\ 1\ 3\ 2\ \times\ \times \\ \hline 1\ 5\ 5\ 7\ 6 \end{array}$$

Answer: 132 × 118 = 15576.

(b)

$$\begin{array}{r} \overset{}{}\ \overset{}{}\ \overset{}{}\ \overset{(1)}{1}\ \overset{(1)}{}\ \\ \ \ \ \overset{(1)}{1}\ \overset{(1)}{}\ \\ \ \ \ \overset{(3)}{}\ \overset{(2)}{}\ \\ \ \ \ 5\ 8\ 5 \\ \times\ \ \ \ 2\ 2\ 4 \\ \hline \ \ \overset{(1)}{}\ \overset{(1)}{}\ \ \\ \ \ \ 2\ 3\ 4\ 0 \\ \ \ 1\ 1\ 7\ 0\ \times \\ +\ 1\ 1\ 7\ 0\ \times\ \times \\ \hline 1\ 3\ 1\ 0\ 4\ 0 \end{array}$$

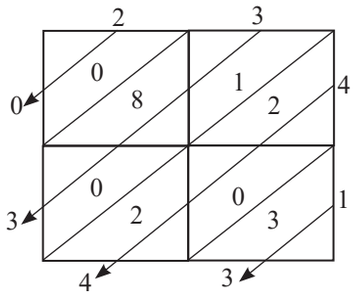
Answer: 585 × 224 = 131040.

(c)

			(2)	(2)		
			(2)	(2)		
			(4)	(3)		
			8	8	7	
×			3	3	5	
		(1)	(1)			
			4	4	3	5
		2	6	6	1	×
+	2	6	6	1	×	×
	2	9	7	1	4	5

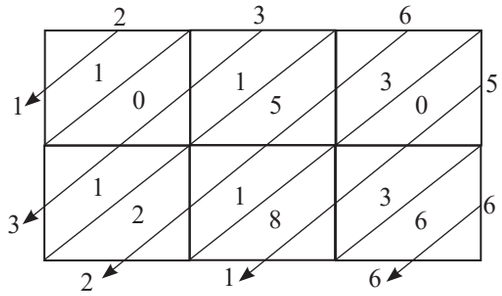
Answer: 887 × 335 = 297145.

7. (a)



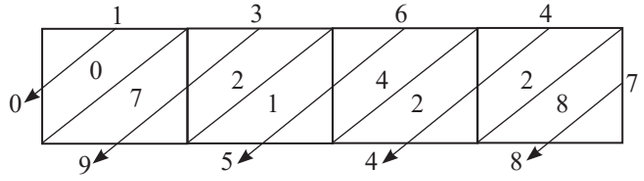
Answer: 23 × 41 = 943

(b)



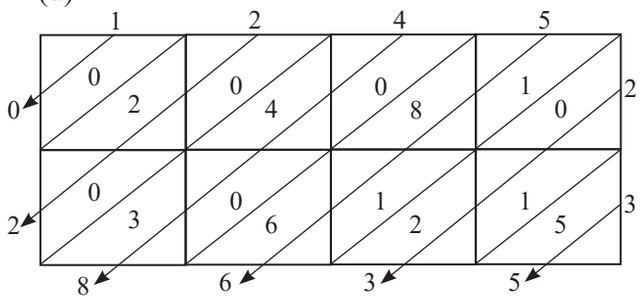
Answer: 236 × 56 = 13216.

(c)



Answer: 1364 × 7 = 9548.

(d)



Answer: 1245 × 23 = 28635.

8. (a) Cost of making a washing machine: ₹8732

Cost of making 35 such washing machines = Cost of a washing machine × 35

= ₹8732 × 35

= ₹305620

				₹		
			(2)			
		(3)	(1)	(1)		
		8	7	3	2	
×				3	5	
(1)			(1)	(1)		
	4	3	6	6	0	
+	2	6	1	9	6	×
	3	0	5	6	2	0

Answer: Cost of making 35 such washing machines is ₹305620

(b) Total Vehicles crosses flyover in one day: 775

Total days in June: 30

Total Vechicles that will cross the flyover in June: Total Vehicles Crosses in 1 day × Total days in June

= 775 × 30

= 23250

			(2)	(1)	
			7	7	5
×				3	0
			0	0	0
+	2	3	2	5	×
	2	3	2	5	0

Answer: 23250 vecicles will corss the flyover in the mouth of June.

(c) Weight of a football: 750g

Weight of 1025 Such footballs: 1025 × 750g

= 768750g

			g			
			(1)			
			(2)			
			7	5	0	
×			1	0	2	5
			3	7	5	0
		1	5	0	0	×
		0	0	0	×	×
+	7	5	0	×	×	×
	7	6	8	7	5	0

Answer: 25 Such footballs will weight 768750g.

(d) Number of pages one math book contains: 260

Number of pages 600 Such books will contain: 260 × 600

= 21600

				2	6	0
×				6	0	0
				0	0	0
			0	0	0	×
+	1	5	6	0	×	×
	1	5	6	0	0	0

Answer: 600 Such math books will contain 156000 pages

Multiple Choice Question

1.

		1	0	
×	1	0	0	
1	0	0	0	

Answer: (b) 1000.

2. 100 × 15 × (0) = 0 (The product of number by 0 is always 0).

Answer: (c) 0.

3. 325 × 38 = 325 × 30 + 325 × (8) (Distributive property of multiplication)

Answer: (a) 8.

4. 105 × 7000 or 105 × 7 × 1000

	(3)		
1	0	5	
×		7	
7	3	5	

= 735 × 1000

= 735000

Answer: (b) 7, 35, 000

5. 35 × (24 × (20)) = (35 × 24) × 20 (Grouping property)

Answer: (b) 20

6. (999) × 1000 = 100 × 999 (Order property)

Answer: (b) 999

7. 65 × 0 × 198 = 0 (The product of number by 0 is always 0).

Answer: (a) 0

Skills Check

1. Guests of Mr Singh: 25

Number of People each guests brings: 2

Total number of friends each guests bring: 25 × 2

= 50

Total number of people: Guests of Mr. Singh + Total friends of Mr. Singh quests

= 25 + 50

= 75

Number of burger 1 guest ate: 2

Number of burger 75 quest will eat = 2 × 75

= 150

Answer: Mr. Singh has to order 150 burgers.

2. Total number of brushes in a set: 24

Number of students in each batch: 149

Total Number of students in 2 batches: 149 × 2

= 298

Total paint brushes needed: Number of students × Number of brushes in a set

= 298 × 24

= 7152

$$\begin{array}{cccc} & \textcircled{1}\textcircled{1} & & \\ & \textcircled{3}\textcircled{3} & & \\ & 2 & 9 & 8 \\ \times & & 2 & 4 \\ \hline & \textcircled{1}\textcircled{1} & & \\ & 1 & 1 & 9 & 2 \\ + & 5 & 9 & 6 & \times \\ \hline & 7 & 1 & 5 & 2 \end{array}$$

Answer: Total number of brushes needed is 7152.

4 Division

Get started

Total number of students: 20

Total number of beads: 100

Total number of Stickers: 180

Total number of beads each student will get $100 \div 20 = 5$

$$\begin{array}{r} 5 \\ 20\overline{)100} \\ -\,100 \\ \hline 0 \end{array}$$

Total number of sticker each student will get: $180 \div 20 = 9$

$$\begin{array}{r} 9 \\ 20\overline{)180} \\ -\,180 \\ \hline 0 \end{array}$$

Answer: Each student will get 5 beads and 9 stickers

Exercise 4.1

1. (a) 90, 5, 18

(b) 144, 9, 16

(c) $14 \div 14 = \boxed{1}$ (Divison of a number by 1 gives the quotient as the number itself).

(d) $7 \div \boxed{7} = 1$ (Divison of a number by 1 gives the quotient as the number itself).

(e) $153 \div \boxed{153} = 1$ (Divison of a number by 1 gives the quotient as the number itself).

(f) $\boxed{0} \div 5 = 0$ (Zero divided by a number (other than 0) gives the quotient 0).

(g) $0 \div 16 = \boxed{0}$ (Zero divided by a number (other than 0) gives the quotient 0).

(h) $\boxed{0} \div 192 = 0$ (Zero divided by a number (other than 0) gives the quotient 0).

2. (a) $35 \div 7$, $35 \div 5$

(b) $60 \div 15$, $60 \div 4$

(c) $120 \div 12$, $120 \div 10$

(d) $98 \div 14$, $98 \div 7$

3. (a)

$$\begin{array}{r} 21 \\ 4\overline{)85} \\ -\,8\downarrow \\ \hline 5 \\ -\,4 \\ \hline 1 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$85 = 4 \times 21 + 1$

$85 = 84 + 1$

$85 = 85$

The answer is same as the dividend. Therefore, the division is correct.

(b)

$$\begin{array}{r} 13 \\ 6\overline{)78} \\ -\,6\downarrow \\ \hline 18 \\ -\,18 \\ \hline 0 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$78 = 60 \times 13 + 0$

$78 = 78$

The answer is same as the dividend. Therefore, the division is correct.

(c)

$$\begin{array}{r} 16 \\ 5\overline{)84} \\ -\,5\downarrow \\ \hline 34 \\ -\,30 \\ \hline 4 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$84 = 5 \times 16 + 4$

$84 = 80 + 4$

$84 = 84$

The answer is same as the dividend. Therefore, the division is correct.

(d)

$$\begin{array}{r} 24 \\ 3\overline{)74} \\ -\,6\downarrow \\ \hline 14 \\ -\,12 \\ \hline 2 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$74 = 3 \times 24 + 2$

$74 = 72 + 2$

$74 = 74$

The answer is same as the dividend. Therefore, the division is correct.

4. Total number of candies mon have: 27

Total number of children: 3

Number of candies each child will get: Total number of candies ÷ Number of childeren

$= 27 \div 3$

$= 9$

$$\begin{array}{r} 9 \\ 3\overline{)27} \\ -\,27 \\ \hline 0 \end{array}$$

Answer: Each children will get 9 candies.

5. Number of total seats in train: 666 seats

Number of seats in each coach: 74 seats

Number of coaches in the train: Number of total seats in train ÷ Number of seats in each coach.

$= 666 \div 74$

$= 9$ seats

$$\begin{array}{r} 9 \\ 74\overline{)666} \\ -\,666 \\ \hline 0 \end{array}$$

Answer: There are 9 coaches in the train.

Exercise 4.2

1. (a)

$$\begin{array}{r} 102 \\ 2\overline{)204} \\ -\,2\downarrow\downarrow \\ \hline 004 \\ -\,4 \\ \hline 0 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$204 = 2 \times 102 + 0$

$204 = 204$

The answer is same as the dividend. Therefore, the division is correct.

(b)

$$\begin{array}{r} 41 \\ 5\overline{)208} \\ -\,20\downarrow \\ \hline 8 \\ -\,5 \\ \hline 3 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$208 = 5 \times 41 + 3$

$208 = 205 + 3$

$208 = 208$

The answer is same as the dividend. Therefore, the division is correct.

(c)

$$\begin{array}{r} 189 \\ 3\overline{)568} \\ -\,3\downarrow \\ \hline 26 \\ -\,24\downarrow \\ \hline 28 \\ -\,27 \\ \hline 1 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$568 = 3 \times 189 + 1$

$568 = 567 + 1$

$568 = 568$

The answer is same as the dividend. Therefore, the division is correct.

(d)

$$\begin{array}{r} 92 \\ 8\overline{)736} \\ -\,72\downarrow \\ \hline 16 \\ -\,16 \\ \hline 0 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$736 = 8 \times 92 + 0$

$736 = 736$

The answer is same as the dividend. Therefore, the division is correct.

(e)
```
      1660
   5 ) 8303
     - 5
     ---
       33
     - 30
     ----
       30
     - 30
     ----
        03
```

Check: Dividend = Divisor × Quotient + Remainder

$8303 = 5 \times 1660 + 3$

$8303 = 8300 + 3$

$8303 = 8303$

The answer is same as the dividend. Therefore, the division is correct.

(f)
```
      399
   4 ) 1597
     - 12
     ----
       39
     - 36
     ----
        37
      - 36
      ----
         1
```

Check: Dividend = Divisor × Quotient + Remainder

$1597 = 4 \times 399 + 1$

$1597 = 1596 + 1$

$1597 = 1597$

The answer is same as the dividend. Therefore, the division is correct.

(g)
```
      956
   8 ) 7649
     - 72
     ----
       44
     - 40
     ----
       49
      - 48
      ----
         1
```

Check: Dividend = Divisor × Quotient + Remainder

$7649 = 8 \times 956 + 1$

$7649 = 7648 + 1$

$7649 = 7649$

The answer is same as the dividend. Therefore, the division is correct.

(h)
```
      1187
   7 ) 8311
     - 7
     ---
       13
     - 7
     ---
       61
     - 56
     ----
       51
      - 49
      ----
         2
```

Check: Dividend = Divisor × Quotient + Remainder

$8311 = 7 \times 1187 + 2$

$8311 = 8309 + 2$

$8311 = 8311$

The answer is same as the dividend. Therefore, the division is correct.

2. Total number of goods packed in the box = 4725

Number of goods in each box = 25

Number of goods in container: Total number of goods ÷ Number of goods in each box

$= 4725 \div 25$

$= 189$

```
      189
   25 ) 4725
     - 25
     ----
      222
    - 200
    -----
      225
     - 225
     -----
         0
```

Answer: There are 189 boxes in each container.

Exercise 4.3

1. (a)
```
      61
   14 ) 867
     - 84
     ----
       27
     - 14
     ----
       13
```

Check: Dividend = Divisor × Quotient + Remainder

$867 = 14 \times 61 + 13$

$867 = 854 + 13$

$867 = 867$

The answer is same as the dividend. Therefore, the division is correct.

(b)
$$\begin{array}{r} 37 \\ 12\overline{)\,450} \\ -\,36\downarrow \\ \hline 90 \\ -\,84 \\ \hline 6 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$450 = 12 \times 37 + 6$

$450 = 444 + 6$

$450 = 450$

The answer is same as the dividend. Therefore, the division is correct.

(c)
$$\begin{array}{r} 32 \\ 27\overline{)\,864} \\ -\,81\downarrow \\ \hline 54 \\ -\,54 \\ \hline 0 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$864 = 27 \times 32 + 0$

$864 = 864$

The answer is same as the dividend. Therefore, the division is correct.

(d)
$$\begin{array}{r} 16 \\ 32\overline{)\,525} \\ -\,32\downarrow \\ \hline 205 \\ -\,192 \\ \hline 13 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$525 = 12 \times 16 + 13$

$525 = 512 + 13$

$525 = 525$

The answer is same as the dividend. Therefore, the division is correct.

(e)
$$\begin{array}{r} 3 \\ 25\overline{)\,98} \\ -\,75 \\ \hline 23 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$98 = 25 \times 3 + 23$

$98 = 75 + 23$

$98 = 98$

The answer is same as the dividend. Therefore, the division is correct.

(f)
$$\begin{array}{r} 2 \\ 32\overline{)\,78} \\ -\,64 \\ \hline 14 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$78 = 32 \times 2 + 14$

$78 = 64 + 14$

$78 = 78$

The answer is same as the dividend. Therefore, the division is correct.

(g)
$$\begin{array}{r} 1 \\ 42\overline{)\,80} \\ -\,42 \\ \hline 38 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$80 = 42 \times 1 + 38$

$80 = 42 + 38$

$80 = 80$

The answer is same as the dividend. Therefore, the division is correct.

(h)
$$\begin{array}{r} 6 \\ 12\overline{)\,81} \\ -\,72 \\ \hline 9 \end{array}$$

Check: Dividend = Divisor × Quotient + Remainder

$81 = 12 \times 6 + 9$

$81 = 72 + 9$

$81 = 81$

The answer is same as the dividend. Therefore, the division is correct.

Exercise 4.4

1. (a)
$$\begin{array}{r} 788 \\ 12\overline{)9456} \\ -\,84\downarrow \\ \hline 105 \\ -\,96\downarrow \\ \hline 96 \\ -\,96 \\ \hline 0 \end{array}$$

Answer: Quotient: 788

Remainder: 0

(b)
$$\begin{array}{r} 544 \\ 18\overline{)9795} \\ -\,90\downarrow \\ \hline 79 \\ -\,72\downarrow \\ \hline 75 \\ -\,72 \\ \hline 3 \end{array}$$

Answer: Quotient: 544

Remainder: 3

(c)
$$\begin{array}{r} 119 \\ 62\overline{)7398} \\ -\,62\downarrow \\ \hline 119 \\ -\,62\downarrow \\ \hline 578 \\ -\,558 \\ \hline 20 \end{array}$$

Answer: Quotient: 119

Remainder: 20

(d)
$$\begin{array}{r} 465 \\ 21\overline{)9775} \\ -\,84\downarrow \\ \hline 137 \\ -\,126\downarrow \\ \hline 115 \\ -\,105 \\ \hline 10 \end{array}$$

Answer: Quotient: 465

Remainder: 10

(e)
$$\begin{array}{r} 259 \\ 31\overline{)8032} \\ -\,62\downarrow \\ \hline 183 \\ -\,155\downarrow \\ \hline 282 \\ -\,279 \\ \hline 3 \end{array}$$

Answer: Quotient: 259

Remainder: 3

(f)
$$\begin{array}{r} 386 \\ 19\overline{)7349} \\ -\,57\downarrow \\ \hline 164 \\ -\,152\downarrow \\ \hline 129 \\ -\,114 \\ \hline 15 \end{array}$$

Answer: Quotient: 386

Remainder: 15

(g)
$$\begin{array}{r} 261 \\ 25\overline{)6544} \\ -\,50\downarrow \\ \hline 154 \\ -\,150\downarrow \\ \hline 44 \\ -\,25 \\ \hline 19 \end{array}$$

Answer: Quotient: 261

Remainder: 19

(h)
$$\begin{array}{r} 78 \\ 92\overline{)7256} \\ -\,644\downarrow \\ \hline 816 \\ -\,736 \\ \hline 80 \end{array}$$

Answer: Quotient: 78

Remainder: 80

2. (a)
$$\begin{array}{r} 409 \\ 10\overline{)4092} \\ -\,40\downarrow\downarrow \\ \hline 92 \\ -\,90 \\ \hline 2 \end{array}$$

Check: Dividend = Divisor × quotient + Remainder

$4092 = 10 \times 409 + 2$

$4092 = 4090 + 2$

$4092 = 4092$

The answer is same as the dividend. Therefore, the division is correct

(b)
$$\begin{array}{r} 133 \\ 14\overline{)1874} \\ -\,14\downarrow \\ \hline 47 \\ -\,42\downarrow \\ \hline 54 \\ 42 \\ \hline 12 \end{array}$$

Check: Dividend = Divisor × quotient + Remainder

$1874 = 14 \times 133 + 12$

$1874 = 1862 + 12$

$1874 = 1874$

The answer is same as the dividend. Therefore, the division is correct

(c)
$$\begin{array}{r} 458 \\ 12\overline{)5503} \\ -\,48\downarrow \\ \hline 70 \\ -\,60\downarrow \\ \hline 103 \\ -\,96 \\ \hline 7 \end{array}$$

Check: Dividend = Divisor × quotient + Remainder

$5503 = 12 \times 458 + 7$

$5503 = 5496 + 7$

$5503 = 5503$

The answer is same as the dividend. Therefore, the division is correct

(d)
$$\begin{array}{r} 438 \\ 13\overline{)5700} \\ -\,52\downarrow \\ \hline 50 \\ -\,39\downarrow \\ \hline 110 \\ -\,104 \\ \hline 06 \end{array}$$

Check: Dividend = Divisor × quotient + Remainder

$5700 = 13 \times 438 + 6$

$5700 = 5694 + 6$

$5700 = 5700$

The answer is same as the dividend. Therefore, the division is correct

(e)
$$\begin{array}{r} 71 \\ 22\overline{)1564} \\ -\,154\downarrow \\ \hline 24 \\ -\,22 \\ \hline 2 \end{array}$$

Check: Dividend = Divisor × quotient + Remainder

$1564 = 71 \times 22 + 2$

$1564 = 1562 + 2$

$1564 = 1564$

The answer is same as the dividend. Therefore, the division is correct

(f)
$$\begin{array}{r} 126 \\ 32\overline{)4039} \\ -\,32\downarrow \\ \hline 83 \\ -\,64\downarrow \\ \hline 199 \\ -\,192 \\ \hline 7 \end{array}$$

Check: Dividend = Divisor × quotient + Remainder

$4039 = 32 \times 126 + 7$

$4039 = 4032 + 7$

$4039 = 4039$

The answer is same as the dividend. Therefore, the division is correct

(g)
$$\begin{array}{r} 150 \\ 18\overline{)2709} \\ -\,18\downarrow \\ \hline 90 \\ -\,90 \\ \hline 09 \end{array}$$

Check: Dividend = Divisor ×quotient + Remainder

$2709 = 18 \times 150 + 9$

$2709 = 2700 + 9$

$2709 = 2709$

The answer is same as the dividend. Therefore, the division is correct

(h)
$$\begin{array}{r} 163 \\ 20\overline{)3274} \\ -\,20\downarrow \\ \hline 127 \\ -\,120 \\ \hline 74 \\ -\,60 \\ \hline 14 \end{array}$$

Check: Dividend = Divisor ×quotient + Remainder

$3274 = 20 \times 163 + 14$

$3274 = 3260 + 14$

$3274 = 3274$

The answer is same as the dividend. Therefore, the division is correct

3. Total number of shelves in the library: 18

Total number of books in the library: 3618

Books should be kept in one thief:

Total number of books ÷ Total number of shelves

$= 3618 \div 18$

$= 201$

$$\begin{array}{r} 201 \\ 18\overline{)3618} \\ -\,36\downarrow\downarrow \\ \hline 018 \\ -\,18 \\ \hline 0 \end{array}$$

Answer: 201 books should be kept in a shelf. No, books are left in the library as the remainder is 0.

Exercise 4.5

1.

		Quotient	Remainder
(a) $82 \div 10$	=	8	2
(b) $62 \div 10$	=	6	2
(c) $74 \div 10$	=	7	4
(d) $350 \div 10$	=	35	0

When a number is divided by 10, the digit in the ones place forms the remainder and rest of the digits form the quotient.

2.

	Quotient	Remainder
(a) $741 \div 100 =$	7	41
(b) $858 \div 100 =$	8	58
(c) $650 \div 100 =$	6	50
(d) $808 \div 100 =$	8	8

When a number is divided by 100, the digit in the ones and tens place forms the remainder and rest of the digits form the quotient.

3.

	Quotient	Remainder
(a) $2032 \div 1000$	2	32
(b) $5655 \div 1000$	5	655
(c) $6009 \div 1000$	6	9
(d) $5603 \div 1000$	5	603

When a number is divided by 1000, the digit in the ones, tens and hundreds place forms the remainder and rest of the digits form the quotient.

4. Number of biscuits in a celebration packet: 10

Capacity of box: 120

Number of celebration packet fit under the capacity of box: Capacity of box ÷ Number of biscuits in a celebration packes

$= 1120 \div 10$

$= 112$

Answer: 112 celebration packets of 10 biscuit can fit in box having capacity of 1120 packet of biscuit.

Exercise 4.6

1. (a) 87 ÷ 18

87 round upto 90

18 rounds upto 90

so, 87 ÷ 18 → 90 ÷ 20

Q = 4, R = 10

Answer: The estimated quotient = 4

(b) 86 ÷ 14

86 rounds upto 90

14 rounds upto 10

so, 86 ÷ 14 → 90 ÷ 10

Q = 9, R = 0

Answer: The estimated quotient = 9

(c) 88 ÷ 33

88 rounds upto 90

33 rounds upto 30

so, 88 ÷ 33 → 90 ÷ 30

Q = 3, R = 0

Answer: The extimated quotient = 3

(d) 527 ÷ 28

527 rounds upto 500

28 rounds upto 30

so, 527 ÷ 33 → 500 ÷ 30

Q = 16, R = 20

Answer: The estimated Quotient = 16

(e) 401 ÷ 44

401 rounds upto 400

44 rounds upto 40

so, 401 ÷ 44 → 400 ÷ 40

Q = 10, R = 0

Answer: The estimated Quotient = 10

(f) 1812 ÷ 22

1812 rounds upto 2000

22 rounds upto 20

so, 1812 ÷ 22 → 2000 ÷ 20

Q = 100, R = 0

Answer: The estimated Quotient = 100

(g) 4620 ÷ 84

4620 rounds upto 5000

84 rounds upto 80

so, 4620 ÷ 84 → 5000 ÷ 80

Q = 62, R = 40

Answer: The estimated quotient: 62

(h) 2007 ÷ 53

2007 rounds upto 2000

53 rounds upto 50

so, 2007 ÷ 53 = 2000 ÷ 50

Q = 40, R = 0

Answer: The estimated quotient: 40

2.

	Column A (Question)	Column B (Round to)	Column C (Estimated quotients)
(a)	76 ÷ 22	80 ÷ 20	4
(b)	93 ÷ 28	90 ÷ 30	3
(c)	576 ÷ 42	600 ÷ 40	15
(d)	306 ÷ 61	300 ÷ 60	5
(e)	852 ÷ 92	900 ÷ 90	10

Column A	Column B	Column C
(a)	(iii)	(v)
(b)	(i)	(ii)
(c)	(v)	(iv)
(d)	(ii)	(i)
(e)	(iv)	(iii)

Exercise 4.7

1. Number for Maths books: 16

Cost of 16 maths books: ₹35600

Cost of 1 maths book: Cost of 16 maths books ÷ Number of books

= 35600 ÷ 16 = ₹2225

```
  2225
16)35600
 -32
  36
 -32
  40
 -32
  80
 -80
   0
```

Answer: 1 Maths book Cost ₹2225.

2. Number of trips: 6

Cost of trips: ₹9000

Cost of each trip: Cost of trips ÷ Number of trips = 9000 ÷ 6 = ₹1500

```
 1500
6) 9000
 -6
  30
 -30
   000
```

Answer: 1 Maths book costs ₹1500

3. Total number of words: 1800

Total time taken: 20 minutes

Words composed in a minute: Total number of words ÷ Total time taken

```
  90
20) 1800
 -180
    00
```

= 1800 ÷ 20

= 90 words

Answer: 90 Words are composed in a minute.

4. Number of books: 10

Total number of pages: 1600

Number of pages in each book: Total number of pages ÷ Number of books

= 1600 ÷ 10

= 160

```
  160
6) 1600
 -10
  60
 -60
   00
```

Answer: There are 160 pages in each book.

5. Total number of Women: 816

Number of groups: 8

Number of women in each group: Total number of Women ÷ Number of groups

= 816 ÷ 8

= 102

```
  102
8) 816
 -8
  16
 -16
   0
```

Answer: There are 102 women in each group.

6. Total number of magic cubes: 690

Number of boxes: 30

Number of cubes in each box: Total number of magic cubes ÷ Number of cubes

= 690 ÷ 30

= 23

```
  23
30) 690
 -600
   90
  -90
    0
```

Answer: There are 23 cubes in each box.

7. Greatest 5 digit number: 99999

Greatest 2 digit number: 99

Dividing greatest 5 digit number by greatest 2 digit number

= 99999 ÷ 99

= 1010

```
      1010
30 ) 99999
   - 99
   -----
      99
    - 99
    ----
      09
```

Answer: Yes, we get remainder as 9.

Learning Updates

1. (a) 608 ÷ 2 = 304

```
    304
2 ) 608
  - 6
  ---
    08
  - 8
  ---
    0
```

(b) 84 ÷ 4 = 21

```
    21
4 ) 84
  - 8
  ---
    4
  - 4
  ---
    0
```

(c) 533 ÷ 8 = 66

```
    66
8 ) 533
  - 48
  ----
    53
  - 48
  ----
     5
```

(d) 820 ÷ 6 = 136

```
    136
6 ) 820
  - 6
  ---
    22
  - 18
  ----
     40
   - 36
   ----
      4
```

(e) 2356 ÷ 4 = 589

```
    589
4 ) 2356
  - 20
  ----
    35
  - 32
  ----
     36
   - 36
   ----
      0
```

(f) 2192 ÷ 7 = 313

```
    313
7 ) 2192
  - 21
  ----
    09
  - 7
  ---
    22
  - 21
  ----
     1
```

(g) 5030 ÷ 10 = 503 (When a number is divided by 10, the digit in the ones place forms the remainder and rest of the digits form the quotient.)

(h) 6666 ÷ 6 = 1111

```
    1111
6 ) 6666
  - 6
  ---
    6
  - 6
  ---
    06
  - 6
  ---
    06
  - 6
  ---
    0
```

2. (a)

```
     2
20 ) 56
   - 40
   ----
     16
```

Answer: **Quotient** = 2
Remainder = 16

(b)

```
     1
63 ) 84
   - 63
   ----
     21
```

Answer: **Quotient:** 1
Remainder: 21

(c)
$$\begin{array}{r} 6 \\ 72\overline{)440} \\ -\,432 \\ \hline 8 \end{array}$$

Answer: Quotient: 6
Remainder: 8

(d)
$$\begin{array}{r} 8 \\ 98\overline{)852} \\ -\,784 \\ \hline 68 \end{array}$$

Answer: Quotient: 8
Remainder: 68

(e)
$$\begin{array}{r} 167 \\ 44\overline{)7350} \\ -\,44\downarrow \\ \hline 295 \\ -\,264\downarrow \\ \hline 310 \\ -\,308 \\ \hline 2 \end{array}$$

Answer: Quotient: 167
Remainder: 2

(f)
$$\begin{array}{r} 54 \\ 99\overline{)5403} \\ -\,495\downarrow \\ \hline 453 \\ -\,396 \\ \hline 57 \end{array}$$

Answer: Quotient: 54
Remainder: 57

(g)
$$\begin{array}{r} 54 \\ 74\overline{)4024} \\ -\,370\downarrow \\ \hline 324 \\ -\,296 \\ \hline 28 \end{array}$$

Answer: Quotient: 54
Remainder: 28

(h)
$$\begin{array}{r} 246 \\ 36\overline{)8878} \\ -\,72\downarrow \\ \hline 167 \\ -\,144 \\ \hline 238 \\ -\,216 \\ \hline 22 \end{array}$$

Answer: Quotient: 246
Remainder: 22

3. (a) 153 ÷ 1 = 153 (Divison by 1 gives quotient the number itself)

(b) 240 ÷ 240 = 1 (Divison by 1 gives quotient the number itself)

(c) 37 ÷ 37 = 1 (Divison by 1 gives quotient the number itself)

(d) 780 ÷ 1 = 780 (Divison by 1 gives quotient the number itself)

(e) 430 ÷ 430 = 1 (Divison by 1 gives quotient the number itself)

(f) 0 ÷ 950 = 0 (Zero divided by a number (0 there than 0) gives the quotient 0.

4.

		Quotient	Remainder
(a)	In 84 ÷ 10	8	4 (When a number is divided by 10, the digit in the ones place forms the remainder and rest of the digits form the quotient.)
(b)	In 856 ÷ 10	85	6 (When a number is divided by 10, the digit in the ones place forms the remainder and rest of the digits form the quotient.)
(c)	In 648 ÷ 100	6	48 (When a number is divided by 100, the digit in the ones and tens place forms the remainder and rest of the digits form the quotient.)
(d)	In 944 ÷ 100	9	44 (When a number is divided by 100, the digit in the ones and tens place forms the remainder and rest of the digits form the quotient.)
(e)	In 7952 ÷ 1000	7	952 (When a number is divided by 1000, the digit in the ones, tens and hundreds place forms the remainder and rest of the digits form the quotient.)

5.

	Question	Round to	Division	Estimated quotient
(a)	81 ÷ 16	81 round upto 80 16 round upto 20	81 ÷ 16 → 80 ÷ 20	4
(b)	56 ÷ 22	56 round upto 60 22 round upto 20	56 ÷ 22 → 60 ÷ 20	3
(c)	312 ÷ 45	312 round upto 300 45 round upto 50	312 ÷ 45 → 300 ÷ 50	6

6. (a) False

(b) Dividend = Divisor × Quotient + Remainder

$49 = 5 \times 9 + 0$

$49 \neq 45$ (False)

(c) True

7. (a) Number of days in 24 hours: 1 days

Number of days in 6552 hours: 6552 ÷ 24

= 273 days

```
   273
12)6552
 - 48
  175
 - 168
   72
  - 72
    0
```

Answer: There are 273 days in 6552 hours.

(b) 1 dozen = 12

Number of bangles pihu have: 768

Number of dozens of Pihu' s bangles: 768 ÷ 12 = 64

Answer: Pihu have 64 dozens of bangles.

```
   64
12)768
 - 72
  48
 - 48
   0
```

(c) Distance Covered in 26 hours: 8196 km

Distance Covered in 1 hours: 8196 ÷ 26

= 315.23 (Approv)

```
   315.23
26)8196
 - 78
  39
 - 26
  136
  130
   60
  -52
   80
  -72
    8
```

Answer: Bus cover 315.23km approx in 1 hour.

(d) Product of 2 numbers: 9824

Smaller number: 44

Bigger number: Product of 2 numbers ÷ Smaller numbers

```
   223.27
44)9824
 - 88
  102
 - 88
  144
 - 132
  120
  - 88
  320
 - 308
    0
```

= 9824 ÷ 44

= 223.27

Answer: Second number is 223.27

Multiple Choice Questions

1. 8000 ÷ 100 = 80 (When a number is divided by 100, the digit in the ones and tens place forms the remainder and rest of the digits form the quotient.)

(b) 80

2. (a) quotient

3. Double of Number = 1040 or 2 × Number = 1040

Number = 1040 ÷ 2

Number = 520

(c) 520

4. (c) 999

5. (a) 0

Skills Check

1. Greatest 4 digit number = 9999

Remainder on dividing 25 is 24

So, greatest 4-digit number divisible by 25 is

= 9999 – 24

= 9975

$$
\begin{array}{r}
399 \\
25\overline{)9999} \\
-\,75\downarrow \\
\hline
249 \\
-\,225\downarrow \\
\hline
249 \\
-\,255 \\
\hline
24
\end{array}
$$

2. (a) 3 should be added to 4732 to make it divisible by 5 as the number is divisible by 5 when ones digit is either 5 or 0.

(b) To make 4732 divisible by 6 we have to add 2 as 4 + 7 + 3 + 2 = 16, (A number is divisible by 6 when it is divisible by both 2 and 3, for divisibility by 2 the number should be even and for divisibility by 3 the number digits sum should be divisible by 3), which is not divisible by 3

(c) To make 4732 divisible by 9, we have to add 2 as 4 + 7 + 3 + 2 = 16 and to make a number divisible by 9, the sum of the digits of the number should be divisible by 9.

(d) To make 4732 divisible by 12, we have to add 8 as to make a number divisible by 12. the number should be divisible by both 3 and 4.

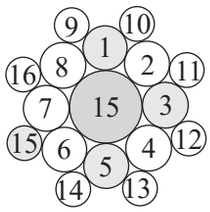
5 Factors and Multiples

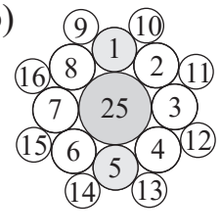
Get Started

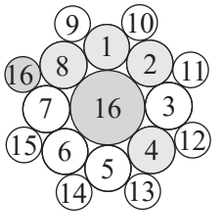
$1 \times 4 = 4$, $2 \times 4 = 8$, $3 \times 4 = 12$, $4 \times 4 = 16$, $5 \times 4 = 20$, $6 \times 4 = 24$, $7 \times 4 = 28$, $8 \times 4 = 32$, $9 \times 4 = 36$, $5 \times 5 = 25$

Exercise 5.1

1. Copy figure from book and colour the following number

(a) 

(b) 

(c) 

2. 1×20, 2×10, 5×4

Factors of 20 using these multiplication facts = 1, 2, 4, 5, 10, and 20

3. (a) $1 \times 36 = 36$

$2 \times 18 = 36$

$3 \times 12 = 36$

$4 \times 9 = 36$

$6 \times 6 = 36$

$\underbrace{12 \times 3}_{\text{Factors}} = 36$

Answer: Factors 1, 2, 3, 4, 6, 9, 12, 18 and 36

(b) $1 \times 65 = 65$

$\underbrace{5 \times 13}_{\text{Factors}} = 65$

Answer: Factors 1, 5, 13, and 65

(c) $1 \times 27 = 27$

$\underbrace{3 \times 9}_{\text{Factors}} = 27$

Answer: Factor of 27 = 1, 3, 9 and 27

(d) $1 \times 93 = 93$

$\underbrace{3 \times 31}_{\text{Factors}} = 93$

Factor of 93 = 1, 3, 31 and 93

(e) $1 \times 31 = 31$

Factor 31 are 1, 31

4. (a)

$3\overline{)15}$ quotient 5: $15 - 15 = 0$

$5\overline{)15}$ quotient 3: $15 - 15 = 0$

$15\overline{)15}$ quotient 1: $15 - 15 = 0$

$1\overline{)15}$ quotient 15: $15 - 15 = 0$

Since division of 15 by 1, 3, 5, 15, leaves remainder 0, they are the factors of 15.

(b)

$1\overline{)18}$ quotient 18: $18 - 1 = 17$, $17 - 8 = 9$, $9 - 9 = 0$

$2\overline{)18}$ quotient 9: $18 - 18 = 0$

$3\overline{)18}$ quotient 6: $18 - 18 = 0$

$6\overline{)18}$ quotient 3: $18 - 18 = 0$

$9\overline{)18}$ quotient 2: $18 - 18 = 0$

$18\overline{)18}$ quotient 1: $18 - 18 = 0$

Since division of 18 by 1, 2, 3, 6, 9, 18 leaves remainder 0, so they are the factors of 18.

(c)

$1\overline{)56}$ quotient 56: $56 - 5 = 51$, $51 - 6 = 45$, $45 - 5 = 40$, $40 - 40 = 0$

$2\overline{)56}$ quotient 28: $56 - 4 = 52$, $52 - 4 = 48$, $48 - 16 = 32$, $32 - 32 = 0$

$4\overline{)56}$ quotient 14: $56 - 4 = 52$, $52 - 4 = 48$, $48 - 16 = 32$, $32 - 32 = 0$

$$\begin{array}{r} 8 \\ 7\overline{)\,56} \\ -\,56 \\ \hline 0 \end{array} \qquad \begin{array}{r} 7 \\ 8\overline{)\,56} \\ -\,56 \\ \hline 0 \end{array} \qquad \begin{array}{r} 4 \\ 14\overline{)\,56} \\ -\,56 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 2 \\ 28\overline{)\,56} \\ -\,56 \\ \hline 0 \end{array} \qquad \begin{array}{r} 1 \\ 56\overline{)\,56} \\ -\,56 \\ \hline 0 \end{array}$$

Since, division of 56 by 1, 2, 4, 7, 8, 14, 28, 56 leaves remainder, 0 hence they are the factors of 56.

(d) $\begin{array}{r} 71 \\ 1\overline{)\,71} \\ -\,7\downarrow \\ \hline 01 \\ -\,1 \\ \hline 0 \end{array}$ $\begin{array}{r} 1 \\ 71\overline{)\,71} \\ -\,71 \\ \hline 0 \end{array}$

Since, division of 71 by 1, 71 leaves remainder 0, hence they are the factors of 71.

(e) $\begin{array}{r} 23 \\ 1\overline{)\,23} \\ -\,2\downarrow \\ \hline 03 \\ -\,3 \\ \hline 0 \end{array}$ $\begin{array}{r} 1 \\ 23\overline{)\,23} \\ -\,23 \\ \hline 0 \end{array}$

Since, division of 23 by 1, 23 leaves remainder 0, hence they are the factors of 23.

5. (a) $\begin{array}{r} 29 \\ 6\overline{)176} \\ -\,12\downarrow \\ \hline 56 \\ -\,54 \\ \hline 2 \end{array}$

Since, division of 176 by 6 leaves remainder 2, So, 6, is not a factor of 176.

(b) $\begin{array}{r} 12 \\ 12\overline{)144} \\ -\,12\downarrow \\ \hline 24 \\ -\,24 \\ \hline 0 \end{array}$

Since, division of 144 by 12 leaves remainder 0, so 12 is a factor of 144.

(c) $\begin{array}{r} 30 \\ 5\overline{)160} \\ -\,15\downarrow \\ \hline 10 \\ -\,10 \\ \hline 0 \end{array}$

Since, division of 160 by 5 leaves the remainder 0 so, 5 is a factor of 160.

(d) $\begin{array}{r} 16 \\ 15\overline{)250} \\ -\,15\downarrow \\ \hline 100 \\ -\,90 \\ \hline 10 \end{array}$

Since division of 250 by 15 leaves the remainder 10, so 15 is not a factor of 250

6. (a) Two factors: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29 (With factors as 1 and the number itself.)

(b)

Four Factors	
Numbers	**Factors**
14	1, 2, 7, 14
6	1, 2, 3, 6
8	1, 2, 4, 8
10	1, 2, 5, 10
15	1, 3, 5, 15
21	1, 3, 7, 21
22	1, 2, 11, 22
26	1, 2, 13, 26
27	1, 3, 9, 27

(c)

Three Factors	
Number	**Factors**
4	1, 2, 4
9	1, 3, 9
25	1, 5, 25

7. (a)
$$\begin{array}{r} 9 \\ 10\overline{)\,92} \\ -\,90 \\ \hline 2 \end{array}$$
The given statement is false as division of 92 by 10 leaves reminder 2 ✗.

(b)
$$\begin{array}{r} 198 \\ 1\overline{)198} \\ -\,1\downarrow \\ \hline 09 \\ -\,9\downarrow \\ \hline 08 \\ -\,8 \\ \hline 0 \end{array}$$
The given statement is true as division of 198 by 1 leaves remainder 0 ✓.

(c) The given statement is false as 0 is not a factor of any number ✗.

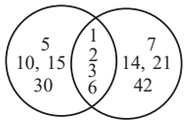
(d) The given statement is true as a number is a always a factor of itself ✓.

Exercise 5.2

1. (a) Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30

Factors of 42: 1, 2, 3, 6, 7, 17, 21, 42

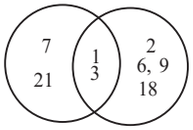
Common factors: 1, 2, 3, 6



(b) Factor of 21 = 1, 3, 7, 21

Factor of 18 = 1, 2, 3, 6, 9, 18

Common factor: 1, 3



2. (a) 12 and 36

The factor of 12 = 1, 2, 3, 4, 6, 12

12 can be written as

$1 \times 12 = 12$

$2 \times 6 = 12$

$\underbrace{3 \times 4}_{\text{Factors}} = 12$

The factor of 36 = 1, 2, 3, 4, 6, 12, 18, 36

36 can be written as

$1 \times 36 = 36$

$2 \times 18 = 36$

$3 \times 12 = 36$

$4 \times 9 = 36$

$\underbrace{6 \times 6}_{\text{Factors}} = 36$

Common Factor of 12 and 36 are 1, 2, 3, 4, 6 and 12.

(b) 18 and 72

18 can be written as

$18 = 1 \times 18$

$18 = 2 \times 9$

$18 = \underbrace{3 \times 6}_{\text{Factors}}$

72 can be written as

$72 = 1 \times 72$

$72 = 2 \times 36$

$72 = 3 \times 24$

$72 = 4 \times 18$

$72 = 6 \times 12$

$72 = \underbrace{8 \times 9}_{\text{Factors}}$

The factors of 18 are: 1, 2, 3, 6, 9 and 18

The factors of 72 are: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36 and 72

Common factors of 18 and 72 are: 1, 2, 3, 6, 9

and 18

(c) 25 and 15

25 can be written as

$1 \times 25 = 25$

$\underbrace{5 \times 5}_{\text{Factors}} = 25$

15 can be written as

$1 \times 15 = 15$

$\underbrace{3 \times 5}_{\text{Factors}} = 15$

The factors of 25 are: 1, 5, 25

The factors of 15 are: 1, 3, 5

Common factors of 25 and 15 are 1 and 5.

(b) 15 and 24

15 can be written as

$1 \times 15 = 15$

$\underbrace{3 \times 5}_{\text{Factors}} = 15$

24 can be written as

$1 \times 24 = 24$

$2 \times 12 = 24$

$3 \times 8 = 24$

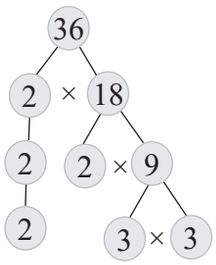
$\underbrace{4 \times 6}_{\text{Factors}} = 24$

The factors of 15 are 1, 3, 5 and 15

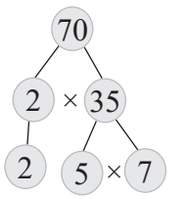
The factors of 24 are: 1, 2, 3, 4, 6, 8, 12 and 24

Common factors of 15 and 24 are 1 and 3.

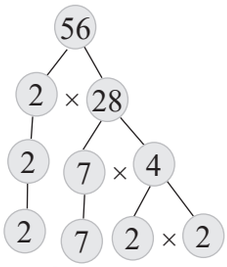
3. (a)



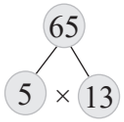
(b)



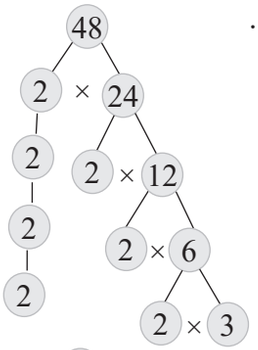
(c)



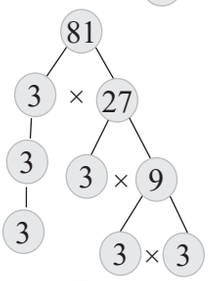
4. (a)



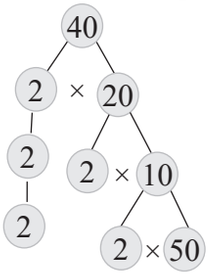
(b)



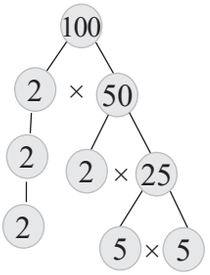
(c)



(d)



(e)



Exercise 5.3

1. (a)

5×1 = 5	5×2 = 10	5×3 = 15	5×4 = 20	5×5 = 25

This first five multiples of 5 are 5, 10, 15, 20, 25.

(b)

7×1 = 7	7×2 = 14	7×3 = 21	7×4 = 28	7×5 = 35

The first five multiples of 7 are 7, 14, 21, 28, 35.

(c)

9×1 = 9	9×2 = 18	9×3 = 27	9×4 = 36	9×5 = 45

The first five multiples of 9 are 9, 18, 27, 36, 45.

(d)

11×1 = 11	11×2 = 22	11×3 = 33	11×4 = 44	11×5 = 55

The first five multiples of 11 are 11, 22, 33, 44, 55.

(e)

15×1 = 15	15×2 = 30	15×3 = 45	15×4 = 60	15×5 = 75

The first five multiples of 15 are 15, 30, 45, 60 and 75.

(f)

18×1 = 18	18×2 = 36	18×3 = 54	18×4 = 72	18×5 = 90

The first five multiple of 18 are 18, 36, 54, 72 and 90.

2.

$4 \times 18 = 72$

$4 \times 24 = 96$

$4 \times 30 = 120$

$4 \times 36 = 144$

$4 \times 49 = 196$

$4 \times 70 = 280$

3. (a) The first 6 even number are 2, 4, 6, 8, 10, 12

4×1 = 4	4×2 = 8	4×4 = 16	4×6 = 24	4×8 = 32	4×10 = 40

Thus, the first 6 even multiples of 4 are 4, 8, 16, 24, 32 and 40.

(b) The first 6 even number are 2, 4, 6, 8, 10, 12

6×1 = 6	6×2 = 12	6×4 = 24	6×6 = 30	6×8 = 48	6×10 = 60

Thus, the first even 6 multiples of 6 are 6, 12, 24, 36, 48 and 60.

(c) The first 6 even number are 2, 4, 6, 8, 10, 12

7×2 = 14	7×4 = 28	7×6 = 42	7×8 = 56	7×10 = 70	7×12 = 84

Thus, the first even 6 multiples of 7 are 14, 28, 42, 56, 70 and 84.

(d) The first 6 even number are 2, 4, 6, 8, 10, 12

9×2 = 18	9×4 = 36	9×6 = 54	9×8 = 72	9×10 = 90	9×12 = 108

Thus, the first even 6 multiples of 9 are 18, 36, 54, 72, 90 and 108.

(e) The first 6 even number are 2, 4, 6, 8, 10, 12

13×2 = 26	13×4 = 52	13×6 = 78	13×8 = 104	13×10 = 130	13×12 = 156

Thus, the first 6 even multiples of 13 are 26, 52, 78, 104, 130 and 156.

(f) The first 6 even number are 2, 4, 6, 8, 10, 12

20×1 = 20	20×2 = 40	20×4 = 80	20×6 = 120	20×8 = 160	20×10 = 200

Thus, the first 6 even multiples of 20 are 20, 40, 80, 120, 160 and 200.

4. (a) The first 5 odd number are 1, 3, 5, 7 and 9

5×1 = 5	5×3 = 15	5×5 = 25	5×7 = 35	5×9 = 45

The first 5 odd multiples of 5 are 5, 15, 25, 35, 45.

(b) The first 5 odd number are 1, 3, 5, 7 and 9

7×1 = 7	7×3 = 21	7×5 = 35	7×7 = 49	7×9 = 63

The first 5 odd multiples of 7 are 7, 21, 35, 49 and 63.

(c) The first 5 odd number are 1, 3, 5, 7 and 9

1×9 = 9	3×9 = 27	5×9 = 45	7×9 = 63	9×9 = 81

The first 5 odd multiples of 9 are 9, 27, 45, 63 and 81.

(d) The first 5 odd number are 1, 3, 5, 7 and 9

1×11 = 11	3×11 = 33	5×11 = 55	7×11 = 77	9×11 = 99

The first 5 odd multiples of 15 are 11, 33, 55, 77, and 99.

(e) The first 5 odd number are 1, 3, 5, 7 and 9

1×15 = 15	3×15 = 45	5×15 = 75	7×15 = 105	9×15 = 135

The first 5 odd multiples of 15 are 15, 45, 75, 105 and 135.

5. (a) Since, 9 × 5 = 45

Thus, the 5th multiple of 9 = 45

(b) Since, 7 × 7 = 49

Thus, the 7 th multiple of 7 = 49

(c) 3 × 6 = 18, 3 × 7 = 21, 3 × 8 = 24, 3 × 9 = 27, 3 × 10 = 30, 3 × 11 = 33, 3 × 12 = 36, 3 × 13 = 39, 3 × 14 = 42, 3 × 15 = 45, 3 × 16 = 48

(d) 8 × 7 = 56, 8 × 8 = 64, 8 × 9 = 72, 8 × 10 = 80, 8 × 11 = 88, 8 × 12 = 96

(e) 9 × 8 = 72, The first multiple of 9 divisible by 8 is 72.

6. (a) 70, 84, 98, 112, 126, 140 (Mulitples of 14)

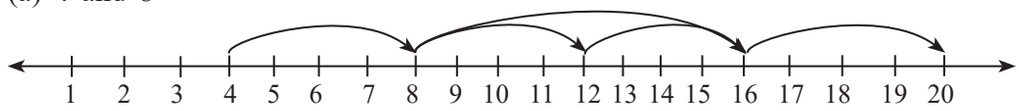
(b) 30, 45, 60, 75, 90, 105 (Multiples of 15)

(c) 24, 32, 40, 48, 56, 64 (Multiples of 8)

(d) 45, 54, 63, 72, 81, 90 (Multiples of 9)

Exercise 5.4

1. (a) 4 and 8

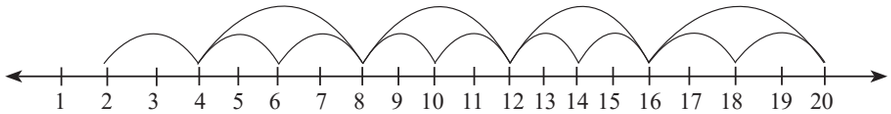


Multiple of 4: 4, 8, 12, 16, 20

Multiple of 8: 8, 16

Common mutiples of 4 and 8 are 8 and 16

(b) 2 and 4



Multiple of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18 and 20

Multiple of 4: 4, 8, 12, 16, 20

Common multiples of 2 and 4: 4, 8, 12, 16 and 20

2. (a) Multiples of 3 are: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48

Multiples of 4 are: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48

First 4 mulitples of 3 and 4 are 12, 24 and 36, 48

(b) Multiples of 2 are: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24

Multiples of 3 are: 3, 6, 9, 12, 15, 18, 21 24, 27, 30, 33, 36

First common multiples of 2 and 3 are 6, 12, 18 and 24

(c) Multiples of 4 are: 4, 8, 12, 16, 20, 24, 28, 32

Multiples of 8 are: 8, 16, 24, 32, 36, 40, 44, 48

First 4 Common multiples of 4 and 8 are 8, 16, 24 and 32

(d) Multiples of 3 are: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36

Multiples of 9 are: 9, 18, 27, 36, 45, 54, 65, 72, 81

Common multiples of 3 and 9 are 9, 18, 27 and 36

(e) The multiples of 10: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120

The multiples of 15: 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 165, 180

First 4 Common multiples of 10 and 15 are 30, 60, 90 and 120

3. (a) Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Multiples of 9: 9, 18, 27, 36, 45, 54, 63, 72, 81, 80

First 3 common multiples of 3 and 9: 9, 18 and 27.

(b) Multiples of 3: 3, 6, 9, 12, 15, 18

Multiples of 6: 6, 12, 18, 24, 30, 36

First 3 common multiples of 3 and 6 are 6, 12 and 18.

(c) Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36

Multiples of 12: 12, 24, 36, 48, 60, 72, 84, 96, 108

First 3 common multiples of 4 and 12 are 12, 24 and 36.

(d) Multiples of 5: 5, 10, 15, 20, 25, 30, 35, 40, 45

Multiples of 15: 15, 30, 45, 60, 75, 90, 105, 120, 135

First 3 common multiples of 5 and 15 are 15, 30 and 45.

(e) Multiples of 15: 15, 30, 45, 60, 75, 90

Multiples of 30: 30, 60, 90, 105, 120, 135

First 3 Common multiples of 15 and 30 are 30, 60 and 90

Exercise 5.5

1. (a) 62 is divisible by 2 as the last digit of 62 is an even number

(b) 65 is not divisible by 2 as the last digit of 65 is not an even number

(c) 642 is divisible by 2 as the last digit of 642 is even number

(d) 372 is divisible by 2 as the last digit of 372 is an even number

(e) 9999 is not divisible by 2 as the last digit of 999 is not an even number

(f) 7040 is divisible by 2 as the last digit of 7040 is an even number

2. A number is divisbile by 3, if the sum of its digits is divisible by 3

	No.	Sum of the digit	Is the sum divisbile by 3	Is the number divisible by 3
(a)	52	5 + 2 = 7	No	No
(b)	36	3 + 6 = 9	Yes	Yes
(c)	294	2 + 9 + 4 = 15	Yes	Yes
(d)	831	8 + 3 + 1 = 12	Yes	Yes
(e)	9603	9 + 6 + 0 + 3 = 18	Yes	Yes
(f)	9363	9 + 3 + 6 + 3 = 21	Yes	Yes

3. A number is divisible by 5, if it has 0 or 5 in its ones place.

	No.s	Digit ones place	0 or 5 at ones place	Divisible by 5
(a)	25	5	Yes	Yes
(b)	300	0	Yes	Yes
(c)	803	3	No	No
(d)	1006	6	No	No
(e)	8000	0	Yes	Yes
(f)	7547	7	No	No

4. A number is divisble by 10 if its last digit (one digit) is 0.

	No.s	Digit at ones place	0 digit at ones place	Divisible by 10
(a)	60	0	Yes	Yes
(b)	800	0	Yes	Yes
(c)	225	5	No	No
(d)	405	5	No	No
(e)	700	0	Yes	Yes
(f)	9560	0	Yes	Yes

	Numbers	Sum of the digit	Is the sum divisible by 3	Divisible by 3	Is the sum divisible by 9	Divisible by 9
(a)	84	8 + 4 = 12	Yes	Yes	No	No
(b)	90	9 + 0 = 9	Yes	Yes	Yes	Yes
(c)	585	5 + 8 + 5 = 18	Yes	Yes	Yes	Yes
(d)	590	5 + 9 + 0 = 14	No	No	No	No
(e)	1420	1 + 4 + 2 + 0 = 7	No	No	No	No
(f)	1800	1 + 8 + 0 + 0 = 9	Yes	Yes	Yes	Yes
(g)	1920	1 + 9 + 2 + 0 = 12	Yes	Yes	No	No

Hence,

		Divisible by					
	No.	2	3	5	9	10
(a)	84			×	×	×
(b)	90					
(c)	585	×				×
(d)	590		×		×	
(e)	1420		×		×	
(f)	100					
(g)	1920				×	

5.

	No.s	Number at ones place	Even number at ones place	Divisible by 2	0 or 5 at ones place	Divisible by 5	0 at one place	Divisible by 10
(a)	84	4	Yes	Yes	No	No	No	No
(b)	90	0	Yes	Yes	Yes	Yes	Yes	Yes
(c)	585	5	No	No	Yes	Yes	No	No
(d)	590	0	Yes	Yes	Yes	Yes	Yes	Yes
(e)	1420	0	Yes	Yes	Yes	Yes	Yes	Yes
(f)	1800	0	Yes	Yes	Yes	Yes	Yes	Yes
(g)	1920	0	Yes	Yes	Yes	Yes	Yes	Yes

Learning Updates

1. (a) $2 \times 1 = 2$, $2 \times 2 = 4$, $2 \times 3 = 6$, $2 \times 4 = 8$

The first four multiples of 2 are **2**, **4**, **6**, and **8**

(b) $5 \times 1 = 5$, $5 \times 2 = 10$, $5 \times 3 = 15$, $5 \times 4 = 20$

The first four multiples of 5 are 5, 10, 15, and 20

(c) $7 \times 1 = 7$, $7 \times 2 = 14$, $7 \times 3 = 21$, $7 \times 4 = 28$

The first four multiples of 7 are **7**, **14**, **21** and **28**

(d) $8 \times 1 = 8$, $8 \times 2 = 16$, $8 \times 3 = 24$, $8 \times 4 = 32$

The first four multiples of 8 are **8**, **16**, **24** and **32**.

2. (a) 4 and 11

(b) 6

(c) factors

(d) 30

3. (a) Multiples of 3: 3, 6, 9, (12), 15, 18, 21, (24)

Multiples of 4: 4, 8, (12), 16, 20, (24), 28, 32

First two common multiples of 3 and 4 are 12 and **24**.

(b) Multiples of 2: 2, 4, 6, 8, (12), 14, 16, 18, 20, 22, (24), 26, 28, 30, 32, 34

Multiples of 3: 3, 6, 9, (12), 15, 18, 21, (24), 27, 30, 33, (36), 39, 42, 45, 48, 51, 54

Multiples of 4: 4, 8, (12), 16, 20, (24), 28, 32, (36), 40, 44, 48, 52, 56, 60, 64, 68, 72

Frist three common multiles of 2, 3 and 4 are **12**, **24**, and **36**.

4. (a) 18 can be written as

$1 \times 18 = 18$

$2 \times 9 = 18$

$\underbrace{3 \times 6}_{\text{Factors}} = 18$

Factors of 18 are 1, 2, 3, 6 and 18

(b) 21 can be written as

$1 \times 21 = 21$

$\underbrace{3 \times 7}_{\text{Factors}} = 18$

Factors of 21 are 3, 7 and 21

(c) 84 can be written as

$1 \times 84 = 84$

$2 \times 42 = 84$

$3 \times 28 = 84$

$4 \times 21 = 84$

$6 \times 14 = 84$

$\underbrace{7 \times 12}_{\text{Factors}} = 84$

Factors of 84 are: 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, and 84.

(d) 56 can be written as

$1 \times 56 = 56$

$2 \times 28 = 56$

$4 \times 14 = 56$

$\underbrace{7 \times 8}_{\text{Factors}} = 56$

Factors of 56 are: 1, 2, 4, 7, 8, 14, 28 and 56.

5. (a) 30, 35, 40, 45, 50, and 55 and 60 (To be divisible 5, a number's ones digit should be 0 aor 5)

(b) 30, 40, 50 and 60 (To be divisible by 10 and number's ones digit should be 0)

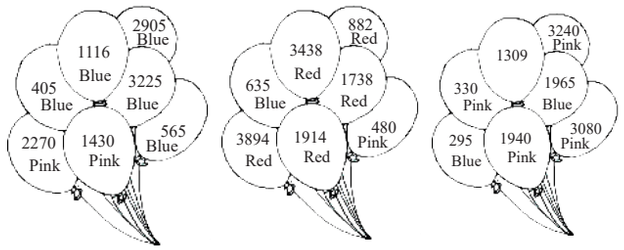
(c) 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62 and 64.

(To be divisible by 2, a number's ones's digit should be even)

(d) 30, 36, 42, 48, 54, and 60 (To be divisible by both 2 and 3 a number's ones digit should be even and sum of its digits should be divisible by 3)

(e) 30, 40, 50 and 60 (To be divisble by both 2 and 5 a number;s ones digit should be even and 5 or 10)

6.



Multiple Choice Questions

1. $3 \times 1 = 3$ (c) 3

2. (a) factor

3. $6 + 3 = 9$ (Divisibility test of 9) (c) 63

4. (d) 9

$$\begin{array}{r} 3 \\ 9\overline{)\,32} \\ -\,27 \\ \hline 5 \end{array}$$ → Remiander left hence not a factor of 9

5. (a) 1

6. (a) one

7. (b) 60

Multiple of 5: 5, 10, 15, 20, 25, 35, 40, 45, 50, 55, (60)

Multiple of 12: 12, 24, 36, 48, (60), 72, 84, 96, 108, 120, 144

Smallest common multiple of 5 and 12 is 60.

Skills Check

Across:

1. $4 \times 6 = 24$

2. Multiple of 7: 7, 14, 21, 28, 35, 42, 49, 56, (63)

Multiples of 9: 9, 18, 27, 36, 45, 54, (63), 72

Common multiple of 7 and 9 is 63.

4. $4 \times 10 = 400$

5. 100

8. Multiple of 5: 5, **10**, 15, 20, 25

Multiple of 2: 2, 4, 6, 8, **10**

9. 1

Down:

1. Multiple of 6: 6, **12**, 18, **24**, 30, 36

Multiple of 4: 4, 8, **12**, 16, 20, **24**

Second common multiple of 6 and 4 is 24.

3. $9 \times 4 = 36$

4. $12 \times 4 = 48$

6. 1

7. $7 \times 3 = 21$

6 Fractions

Get Started

1. Number of pieces of cake: 12

Number of children: 3

Number of pieces of cake child will get:

$$\frac{\text{Total number of pieces of cake}}{\text{Number of children}}$$

$= \frac{12}{3} = 4$

Answer: Each child will get 4 pieces of cake

2. Number of childeren: 6

Number of pieces of cake each child will get

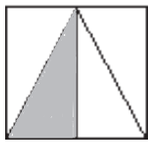
$= \frac{12}{6} = 2$

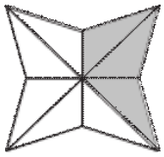
Answer: Each child will get 2 pieces of cake.

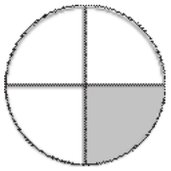
Exercise 6.1

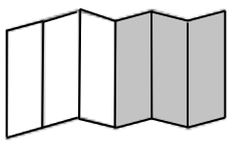
1. (a) $\frac{1}{4}$ (b) $\frac{2}{3}$

(c) $\frac{1}{3}$ (d) $\frac{3}{8}$

2. (a)  $= \frac{1}{4}$

(b)  $= \frac{3}{8}$

(b)  $= \frac{1}{4}$

(b)  $= \frac{3}{5}$

3. (a) $\frac{1}{5}$ (b) $\frac{3}{12}$

(c) $\frac{1}{6}$ (d) $\frac{6}{8}$

(e) $\frac{2}{7}$ (f) $\frac{1}{5}$

4.

	Numerator	Denominator	Fraction
(a)	5	8	$\frac{5}{8}$
(b)	1	4	$\frac{1}{4}$
(c)	3	6	$\frac{3}{6}$

5.

	a	b	c
N	3	4	4
D	8	11	7

6. (a) Part

(b) Whole

(c) 4

(d) Numerator

(e) Denominator

7. Total number of racks: 8

Number of racks filled: 5

Number of empty racks: Total number of racks – Number of raks filled

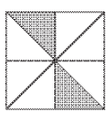
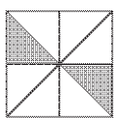
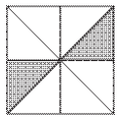
$= 8 - 5 = 3$

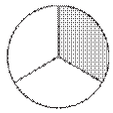
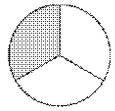
Fraction of empty racks:

$$\frac{\text{Total number of empty racks}}{\text{Total number of racks}} = \frac{3}{8}$$

Answer: Fraction of empty racks is $\frac{3}{8}$.

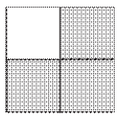
Exercise 6.2

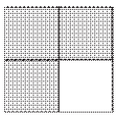
1. (a)  (c)  (d) 

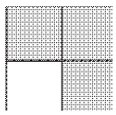
2. (a)  (b) 

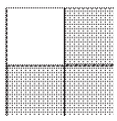
(c) 

(d) 

3. (a) 

(c) 

(d) 

(e) 

4. (a) $\frac{1}{3}$ of 27

$27 \div 3 = 9$

$1 \times 9 = 9$

Answer: 9

(b) $\frac{2}{6}$ of 30

$30 \div 6 = 5$

$2 \times 5 = 10$

Answer: 10

(c) $\frac{4}{8}$ of 24

$24 \div 8 = 3$

$3 \times 4 = 12$

Answer: 12

(d) $\frac{3}{7}$ of 42

$42 \div 7 = 6$

$3 \times 6 = 18$

Answer: 18

(e) $\frac{2}{4}$ of 72

$72 \div 4 = 18$

$2 \times 18 = 36$

Answer: 36

(d) $\frac{4}{9}$ of 54

$54 \div 9 = 6$

$4 \times 6 = 24$

Answer: 24

5. (a) $\frac{1}{5}$ of 75kg

$75 \div 5 = 15$

$1 \times 15 = 15$

Answer: 15kg

(b) $\frac{2}{10}$ of ₹110

$110 \div 10 = 11$

$2 \times 11 = 22$

Answer: ₹22

(c) $\frac{1}{4}$ of a year (in month)

$4 \div 12$ month $= 3$

$1 \times 3 = 3$

Answer: 3 months

(d) $\frac{2}{4}$ of a dozen

$12 \div 4 = 3$

$3 \times 3 = 6$

Answer: 6 dozens

(e) $\frac{3}{4}$ of 96m

$96 \div 4 = 24$

$3 \times 24 = 72$

Answer: 72m

(f) $\frac{3}{10}$ of 9m(in cm)

$\frac{3}{10}$ of 900cm (1m = 100cm, 9m = 9 × 100 = 900 cm)

$900 \div 10 = 90$

$90 \times 3 = 270$ cm

6. Total number of face mask boxes: 24

Fraction of boxes pharmacist sold to Rohit: $\frac{5}{6}$

Number of boxes pharmacist sold to Rohit: Total number of face × Fraction of boxes pharmacist sold to Rohit 24 of $\frac{5}{6} = (24 \div 6) \times 5 = 4 \times 5 = 20$

Answer: Rohit Purchased 20 masks from pharmacist

Exercise 6.3

1. (a) $2 \times 3 = 6$

$= \frac{6}{15}$

(b) $3 \times 4 = 12$

$= \frac{12}{28}$

(c) $16 \div 4 = 4$

$= \frac{4}{5}$

(d) $60 \div 5 = 12$

$= \frac{12}{6}$

2. (a) $5 \times 2 = 10$

$= \frac{6}{10}$

(b) $8 \times 3 = 24$

$= \frac{21}{24}$

(c) $21 \div 3 = 7$

$= \frac{5}{7}$

(d) $40 \div 4 = 10$

$= \frac{16}{10}$

3. (a) $\frac{3}{5} \times \frac{2}{2} = \mathbf{\frac{6}{10}}$, $\frac{3}{5} \times \frac{3}{3} = \mathbf{\frac{9}{15}}$, $\frac{3}{5} \times \frac{4}{4} = \mathbf{\frac{12}{20}}$, $\frac{3}{5} \times \frac{5}{5} = \mathbf{\frac{15}{25}}$, $\frac{3}{5} \times \frac{6}{6} = \mathbf{\frac{18}{30}}$

(b) $\frac{2}{7} \times \frac{2}{2} = \mathbf{\frac{4}{14}}$, $\frac{2}{7} \times \frac{3}{3} = \mathbf{\frac{6}{21}}$, $\frac{2}{7} \times \frac{4}{4} = \mathbf{\frac{8}{28}}$, $\frac{2}{7} \times \frac{5}{5} = \mathbf{\frac{10}{35}}$, $\frac{2}{7} \times \frac{6}{6}$ $\mathbf{\frac{12}{42}}$

(c) $\frac{3}{8} \times \frac{2}{2} = \mathbf{\frac{6}{16}}$, $\frac{3}{8} \times \frac{3}{3} = \mathbf{\frac{9}{24}}$, $\frac{3}{8} \times \frac{4}{4} = \mathbf{\frac{12}{32}}$, $\frac{3}{8} \times \frac{5}{5} = \mathbf{\frac{15}{40}}$, $\frac{3}{8} \times \frac{6}{6} = \mathbf{\frac{18}{48}}$

(d) $\frac{4}{3} \times \frac{2}{2} = \mathbf{\frac{8}{6}}$, $\frac{4}{3} \times \frac{3}{3} = \mathbf{\frac{12}{9}}$, $\frac{4}{3} \times \frac{4}{4} = \mathbf{\frac{16}{12}}$, $\frac{4}{3} \times \frac{5}{5} = \mathbf{\frac{20}{15}}$, $\frac{4}{3} \times \frac{6}{6}$ $= \mathbf{\frac{24}{18}}$

(e) $\frac{7}{5} \times \frac{2}{2} = \mathbf{\frac{14}{10}}$, $\frac{7}{5} \times \frac{3}{3} = \mathbf{\frac{21}{15}}$, $\frac{7}{5} \times \frac{4}{4} = \mathbf{\frac{28}{20}}$, $\frac{7}{5} \times \frac{5}{5} = \mathbf{\frac{35}{25}}$, $\frac{7}{5} \times \frac{6}{6} = \mathbf{\frac{42}{30}}$

4. (a) $\frac{3}{2} \times \frac{2}{2} = \mathbf{\frac{6}{4}}$, $\frac{3}{2} \times \frac{3}{3} = \mathbf{\frac{9}{6}}$, $\frac{3}{2} \times \frac{4}{4} = \mathbf{\frac{12}{8}}$, $\frac{3}{2} \times \frac{5}{5} = \mathbf{\frac{15}{10}}$, $\frac{3}{2} \times \frac{6}{6} = \mathbf{\frac{18}{12}}$, $\frac{3}{2} \times \frac{7}{7} = \mathbf{\frac{21}{14}}$, $\frac{3}{2} \times \frac{8}{8} = \mathbf{\frac{24}{16}}$ $\frac{3}{2} \times \frac{9}{9} = \mathbf{\frac{27}{18}}$

(b) $\frac{2}{9} \times \frac{2}{2} = \mathbf{\frac{4}{18}}$

(c) $\frac{5}{6} \times \frac{2}{2} = \mathbf{\frac{10}{12}}$, $\frac{5}{6} \times \frac{3}{3} = \mathbf{\frac{15}{18}}$

(d) $\frac{5}{3} \times \frac{2}{2} = \mathbf{\frac{10}{6}}$, $\frac{5}{3} \times \frac{3}{3} = \mathbf{\frac{15}{9}}$, $\frac{5}{3} \times \frac{4}{4} = \mathbf{\frac{20}{12}}$, $\frac{5}{3} \times \frac{5}{5} = \mathbf{\frac{25}{15}}$, $\frac{5}{3} \times \frac{6}{6} = \mathbf{\frac{30}{18}}$

(e) $\frac{3}{9} \times \frac{2}{2} = \mathbf{\frac{6}{18}}$

5. (a) $\frac{2}{9} \times \frac{2}{2} = \mathbf{\frac{4}{18}}$, $\frac{2}{9} \times \frac{3}{3} = \mathbf{\frac{6}{27}}$, $\frac{2}{9} \times \frac{4}{4} = \mathbf{\frac{8}{36}}$, $\frac{2}{9} \times \frac{5}{5} = \mathbf{\frac{10}{45}}$, $\frac{2}{9} \times \frac{6}{6} = \mathbf{\frac{12}{54}}$, $\frac{2}{9} \times \frac{7}{7} = \mathbf{\frac{14}{63}}$, $\frac{2}{9} \times \frac{8}{8} = \mathbf{\frac{16}{72}}$, $\frac{2}{9} \times \frac{9}{9} = \mathbf{\frac{18}{81}}$, $\frac{2}{9} \times \frac{10}{10} = \mathbf{\frac{20}{90}}$, $\frac{2}{9} \times \frac{11}{11} = \mathbf{\frac{22}{99}}$, $\frac{2}{9} \times \frac{12}{12} = \mathbf{\frac{24}{108}}$, $\frac{2}{9} \times \frac{13}{13} = \mathbf{\frac{26}{117}}$, $\frac{2}{9} \times \frac{14}{14} = \mathbf{\frac{28}{126}}$, $\frac{2}{9} \times \frac{15}{15} = \mathbf{\frac{30}{135}}$

(b) $\frac{6}{5} \times \frac{2}{2} = \mathbf{\frac{12}{10}}$, $\frac{6}{5} \times \frac{3}{3} = \mathbf{\frac{18}{15}}$, $\frac{6}{5} \times \frac{4}{4} = \mathbf{\frac{24}{20}}$, $\frac{6}{5} \times \frac{5}{5} = \mathbf{\frac{30}{25}}$

(c) $\frac{15}{8} \times \frac{2}{2} = \mathbf{\frac{30}{16}}$

(d) $\frac{10}{7} \times \frac{2}{2} = \mathbf{\frac{20}{14}}$, $\frac{10}{7} \times \frac{3}{3} = \mathbf{\frac{30}{21}}$

(e) $\frac{3}{18} \times \frac{2}{2} = \mathbf{\frac{6}{36}}$, $\frac{3}{18} \times \frac{3}{3} = \mathbf{\frac{9}{54}}$, $\frac{3}{18} \times \frac{4}{4} = \mathbf{\frac{12}{72}}$, $\frac{3}{18} \times \frac{5}{5} = \mathbf{\frac{15}{90}}$, $\frac{3}{18} \times \frac{6}{6} = \mathbf{\frac{18}{108}}$, $\frac{3}{18} \times \frac{7}{7} = \mathbf{\frac{21}{126}}$, $\frac{3}{18} \times \frac{9}{9} = \mathbf{\frac{27}{72}}$, $\frac{3}{18} \times \frac{10}{10} = \mathbf{\frac{30}{180}}$

6. (a) $\frac{2}{5} = \frac{\square}{25}$

We multiply 5 by 5 in order to make donminator 25. So, we also multiply the nume4rator by 5

Thus, $\frac{2}{5} = \frac{2}{5} \times \frac{5}{5} = \frac{\boxed{10}}{25}$

(b) $\frac{3}{9} = \frac{24}{\square}$

We multiply 3 by 8, in order to make numerator 24. so, we multiply the denominator by 8.

Thus, $\frac{3}{9} = \frac{3}{9} \times \frac{8}{8} = \frac{24}{\boxed{72}}$

(c) $\frac{5}{9} = \frac{\square}{72}$

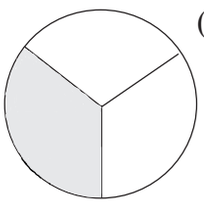
We multiply 8 by 9, in order to make denominator 72. so, we multiply numerator by 8

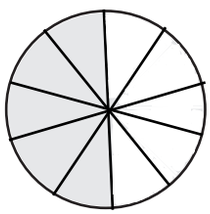
Thus, $\frac{5}{9} = \frac{5}{9} \times \frac{8}{8} = \frac{\boxed{40}}{72}$

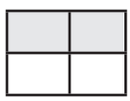
(d) $\frac{4}{7} = \frac{28}{\square}$

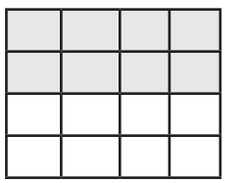
We multiply 4 by 7 in order to make numeartor 28, So, We multiply denominator for by 7.

Thus, $\frac{4}{7} = \frac{4}{7} \times \frac{7}{7} = \frac{28}{\boxed{49}}$

7. (a) 

(b) 

(c) 

(d) 

Exercise 6.4

1. (a) $\frac{4}{16}$

Factor of 4: 1, 2, 4,

Factor of 16: 1, 2, 4, 8, 16

Common Factors: 1, 2, and 4

Thus $\frac{4}{16}$ is not in its simplest form.

(b) $\frac{12}{15}$

Factors of 12: 1, 2, 3, 6, 12

Factor of 15: 1, 3, 5, 15

Common factors: 1 and 3

Thus $\frac{12}{15}$ is not in its simplest form.

(c) $\frac{13}{9}$

Factor of 13: 1, 13

Factor of 9: 1, 3, 9

Common factor: 1

Thus $\frac{13}{9}$ is in its simplest form.

(d) $\frac{19}{21}$

Factor of 19: 1, 19

Factor of 21: 1, 3, 7, 21

Common factor: 1

Thus, $\frac{19}{21}$ is in its simplest form.

(e) $\frac{21}{17}$

Factors of 21: 1, 3, 7

Factors of 17: 1, 17

Common factors: 1

Thus, $\frac{21}{17}$ is in its simplest form

2. (a) $\frac{3}{2}$ (b) $\frac{4}{3}$

(c) $\frac{5}{6}$ (d) $\frac{5}{4}$

3. (a) Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

Factor of 30: 1, 2, 3, 5, 6, 10, 15, 30

Common factors: 1, 2 and 6

$\frac{36 \div 2}{30 \div 2} = \frac{18 \div 3}{15 \div 3} = \frac{6}{5}$

(b) Factors of 30 = 1, 2, 3, 5, 6, 10, 15 and 30

Factors of 10 = 1, 2, 5 and 10

Common factors: 1, 2, 5 and 10

$\frac{30 \div 2}{10 \div 2} = \frac{15 \div 3}{5 \div 3} = \frac{3}{1}$

(c) Factors of 64: 1, 2, 4, 8, 16 and 32

Factors of 16: 1, 2, 4, 8 and 16

Common factors: 1, 2, 4, 8 and 16

$\frac{64 \div 2}{16 \div 2} = \frac{32 \div 4}{8 \div 4} = \frac{8 \div 2}{2 \div 2} = \frac{4}{1}$

(d) Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30, 45 and 90

Factors of 90: 1, 2, 3, 5, 6, 10, 15, 30, 45 and 90

Common factors: 1, 3, 5, 6, 10, 15, 30 and 30

$\frac{30 \div 3}{90 \div 3} = \frac{10 \div 5}{30 \div 5} = \frac{2 \div 2}{6 \div 2} = \frac{1}{3}$

(e) Factors of 55: 1, 5, 11, 55

Factors of 40: 1, 2, 4, 5, 8, 10, 20 and 40

Common factors: 1 and 5

$\frac{55 \div 5}{40 \div 5} = \frac{11}{8}$

(f) Factors of 12: 1, 2, 3, 4, 6 and 12

Factors of 9: 1, 3 and 9

Common factors: 1 and 3

$\frac{12 \div 3}{9 \div 3} = \frac{4}{3}$

(g) Factors of 8: 1, 2, 4 abd 8

Factors of 48: 1, 2, 3, 4, 6, 8, 12, 16, 32 and 48.

Common factors: 1, 2, 4 and 8

$\frac{8 \div 2}{48 \div 2} = \frac{4 \div 4}{24 \div 4} = \frac{1}{6}$

(h) Factors of 20: 1, 2, 5, 10 and 20

Factors of 26: 1, 2, 13 and 26

Common factors = 2 = $\frac{20 \div 2}{26 \div 2} = \frac{10}{13}$

(i) Factors of 49: 1, 7, and 49

Factors of 35: 1, 5 and 7

Common factors: 1 and 7

$\frac{49 \div 7}{35 \div 7} = \frac{7}{5}$

(j) Factors of 13: 1 amd 13

Factors of 65: 1, 5, 13 and 65

Common factor: 13

$\frac{13 \div 13}{65 \div 13} = \frac{1}{5}$

Exercise 6.5

1. (a) $\frac{1}{10}$ (c) $\frac{1}{8}$ (e) $\frac{1}{7}$

(They are unit fraction as their numerator is 1)

2. (a) $\frac{2}{9}$, $\frac{4}{9}$ and $\frac{5}{9}$ (c) $\frac{1}{7}$, $\frac{4}{7}$ and $\frac{6}{7}$

(Same denominators)

3. (a) $\frac{8}{13}$, $\frac{9}{18}$ and $\frac{1}{15}$ (c) $\frac{1}{6}$, $\frac{2}{12}$ and $\frac{3}{19}$

(Different denominators)

4. (a) $\frac{4}{5} < \frac{9}{5}$ (Since 9 > 4)

(b) $\frac{9}{13} > \frac{6}{13}$ (Since 9 > 6)

(c) $\frac{2}{16} < \frac{8}{16}$ (Since 8>2)

(d) $\frac{1}{9} < \frac{3}{9}$ (Since 1 < 3)

(e) $\frac{9}{20} > \frac{7}{20}$ (Since 9 > 7)

5. (a) = (Since 2 = 2)

(b) < (Since 5 > 3)

(c) > (Since 10 > 8)

(d) > (Since 7 > 2)

(e) < (Since 5 > 3)

6. (a) $\frac{5}{8} > \frac{4}{8} > \frac{2}{8}$ (Since 5 > 4 > 2)

(b) $\frac{6}{9} > \frac{2}{9} > \frac{1}{9}$ (Since 6 > 2 > 1)

(c) $\frac{8}{12} > \frac{5}{12} > \frac{1}{12}$ (Since 8 > 5 > 1)

7. (a) $\frac{1}{9} < \frac{2}{9} < \frac{3}{9}$ (Since 1 < 2 < 3)

(b) $\frac{1}{15} < \frac{3}{15} < \frac{9}{15}$ (Since 1 < 3 < 9)

(c) $\frac{3}{7} < \frac{4}{7} < \frac{5}{7} < \frac{8}{7}$ (Since 3 < 4 < 5 < 8)

Exercise 6.6

1. (a) $\frac{4}{9}$ (d) $\frac{16}{24}$ (e) $\frac{2}{21}$

(Since Denominator > Numerator)

2. (a) $\frac{7}{4}$ (b) $\frac{7}{5}$ (e) $\frac{11}{4}$

(Since Denominator < Numerator)

3. (a) $\frac{11}{5}$ (Improper fraction)

= Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction

$$\begin{array}{r} 2 \\ 5\overline{)11} \\ -\,10 \\ \hline 1 \end{array}$$

$\frac{11}{5} = 2\frac{1}{5}$

(b) $\frac{13}{7}$

= Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction

$$\begin{array}{r} 1 \\ 7\overline{)13} \\ -\,7 \\ \hline 6 \end{array}$$

$\frac{13}{7} = 1\frac{6}{7}$

(c) $\frac{21}{15}$

= Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction

$$\begin{array}{r} 1 \\ 5\overline{)21} \\ -\,15 \\ \hline 6 \end{array}$$

$\frac{21}{15} = 1\frac{6}{15}$

(d) $\frac{28}{12}$

= Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction

$$\begin{array}{r} 2 \\ 12\overline{)28} \\ -\,24 \\ \hline 4 \end{array}$$

$\frac{28}{12} = 2\frac{4}{12}$

(e) $\frac{18}{13}$

= Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction

$$\begin{array}{r} 1 \\ 13\overline{)18} \\ -\,13 \\ \hline 5 \end{array}$$

$\frac{18}{13} = 1\frac{5}{13}$

(f) $\frac{24}{7}$

= Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction

$$\begin{array}{r} 3 \\ 7\overline{)24} \\ -\,21 \\ \hline 3 \end{array}$$

$\frac{24}{7} = 3\frac{3}{7}$

4. Proper fraction: $\frac{4}{8}, \frac{2}{3}, \frac{1}{5}, \frac{1}{3}, \frac{3}{7}, \frac{3}{8}, \frac{5}{7}$
(Since Denominator > Numerator)
Improper fraction: $\frac{3}{2}, \frac{7}{2}, \frac{4}{2}, \frac{2}{1}, \frac{4}{3}$
(Since Numerator > Denominator)
Mixed fraction: $5\frac{1}{2}, 11\frac{1}{2}, 3\frac{3}{4}, 5\frac{1}{7}$ (Mixture of a whole number and a proper fraction)

5. (a) $8\frac{2}{2} = \frac{2 \times 8 + 2}{2} = \frac{16 + 2}{2} = \frac{18}{2}$

(b) $4\frac{1}{3} = \frac{4 \times 3 + 1}{3} = \frac{12 + 1}{3} = \frac{13}{3}$

(c) $10\frac{3}{3} = \frac{10 \times 3 + 3}{3} = \frac{30 + 3}{3} = \frac{33}{3}$

(d) $5\frac{1}{4} = \frac{4 \times 5 + 1}{4} = \frac{20 + 1}{4} = \frac{21}{4}$

(e) $6\frac{1}{5} = \frac{5 \times 6 + 1}{5} = \frac{30 + 1}{5} = \frac{31}{5}$

(f) $7\frac{1}{7} = \frac{7 \times 7 + 1}{7} = \frac{49 + 1}{7} = \frac{50}{7}$

Exercise 6.7

1. (a) $\frac{5}{12} + \frac{3}{12}$

$\frac{5 + 3}{12} = \frac{8}{12} = \frac{8 \div 4}{12 \div 4} = \frac{2}{3}$

(b) $\frac{10}{15} + \frac{12}{15}$

$\frac{10 + 12}{15} = \frac{22}{15}$

(c) $\frac{4}{18} + \frac{5}{18} + \frac{2}{18}$

$\frac{4 + 5 + 2}{18} = \frac{11}{18}$

(d) $\frac{1}{14} + \frac{3}{14} + \frac{5}{14}$

$\frac{1 + 3 + 5}{14} = \frac{9}{14}$

2. (a) $1\frac{1}{5} + \frac{1}{5}$

$1 + \frac{1}{5} + \frac{1}{5} = 1 + \frac{1 + 1}{5}$

$= 1 + \frac{2}{5}$

$= 1\frac{2}{5}$

(b) $2\frac{2}{5} + \frac{3}{5}$

$2 + \frac{2}{5} + \frac{3}{5} = 2 + \frac{2}{5} + \frac{3}{5}$

$= 2 + \frac{2 + 3}{5} = 2 + \frac{5}{5}$

$2\frac{5}{5} = \frac{5 \times 2 + 5}{5} = \frac{10 + 5}{5}$

$= \frac{15}{5} = \frac{15 \div 5}{5 \div 5} = \frac{3}{1}$

(c) $4\frac{2}{3} + \frac{2}{3}$

$4 + \frac{2 + 2}{3}$

$\frac{4}{1} + \frac{4}{3} = \frac{12 + 4}{3} = \frac{16}{3}$

(d) $3\frac{1}{9} + 2\frac{1}{9}$

$3 + \frac{1}{9} + 2 + \frac{1}{9}$

$5 + \frac{1}{9} = \frac{1}{9}$

$5 + \frac{1 + 1}{9} = 5 + \frac{2}{9}$

$5\frac{2}{9} = \frac{5 \times 9 + 2}{9}$

$= \frac{45 + 2}{9} = \frac{47}{9}$

3. (a) $\frac{8}{11} - \frac{6}{11} = \frac{8 - 6}{11} = \frac{2}{11}$

(b) $\frac{9}{11} - \frac{7}{11} = \frac{9 - 9}{11} = \frac{0}{11} = 0$

(c) $\frac{9}{17} - \frac{9}{17} = \frac{9 - 7}{17} = \frac{2}{17}$

(d) $\frac{8}{9} - \frac{4}{9} = \frac{8 - 4}{9} = \frac{4}{9}$

4. (a) $4\frac{1}{10} - 3\frac{1}{10} = 4 + \frac{1}{10} - 3 + \frac{1}{10} = 4 - 3 = 1$

(b) $3\frac{7}{16} - 2\frac{1}{16} = 3 + \frac{7}{16} - 2 + \frac{1}{16} = 1 + \frac{7-1}{16} = 1\frac{6}{16} = \frac{16 \times 1 + 6}{16} = \frac{22}{16} = \frac{22 \div 2}{16 \div 2} = \frac{11}{8}$

(c) $13\frac{3}{14} - 11\frac{2}{14} = 13 + \frac{3}{14} - 11 + \frac{2}{14} = 2 + \frac{3}{14} - \frac{2}{14} = 2 + \frac{1}{14}$

$2\frac{1}{14} = \frac{14 \times 2 + 1}{14} = \frac{28 + 1}{14} = \frac{29}{14}$

(d) $2\frac{3}{4} - 3\frac{1}{4} = 2 + \frac{3}{4} - 3 + \frac{1}{4} = -1 + \frac{3}{4} - \frac{1}{4} = -1 + \frac{2}{4} - 1\frac{2}{4} = \frac{4 \times -1 + 2}{4} = \frac{-4 + 2}{16} = \frac{-2}{4} = \frac{2 \div 2}{4 \div 2} = \frac{-1}{2}$

5. Total pieces of chocolate: 8

Total pieces Ritu ate: $\frac{2}{8}$

Pieces of chocolate left: Total pieces of chocolate – Pieces Ritu ate

$= \frac{8}{8} - \frac{2}{8} = \frac{8-2}{8} = \frac{6}{8}$

$= 0.75$

Answer: 0.75 pieces of chocolate is left.

6. Weight of tomatoes: $\frac{3}{4}$kg

Weight of Raddish: $\frac{1}{4}$kg

Weight of Carrots: $1\frac{2}{4}$kg

Total kg of vegetables Shreya bought = Weight of Tomatoes + Weight of Raddish + Weight of Carrots

$= \frac{3}{4} + \frac{1}{4} + 1\frac{2}{4}$

$= \frac{3}{4} + \frac{1}{4} + 1 + \frac{2}{4}$

$= 1 + \frac{3+1+2}{4} = 1 + \frac{6}{4}\frac{3}{2} = 1\frac{3}{2} = \frac{5}{2} = 2.5$

Answer: Shreya bougth 2.5kg of vegetables.

Execise 6.8

1. Cost of notebook: ₹35

Cost of book: $₹42\frac{1}{2}$

Total cost of both the items: Cost of notebook + Cost of book

$= ₹35 + ₹42\frac{1}{2}$

$= \frac{35}{1} + \frac{1}{2} + 42$

$= \frac{70+1}{1} + 42$

$= \frac{71}{2} + 42 = 42\frac{71}{2} = \frac{42 \times 2 + 71}{2} = \frac{84 + 71}{2}$

$= \frac{155}{2} = 77.5$

Answer: Total cost of both the items is ₹77.5

2. Length of red lace: $2\frac{4}{5}$

Length of green lace: $4\frac{1}{4}$

Length of both the laces: Length of red lace + Length of green lace

$= 2\frac{4}{5} + 4\frac{1}{4}$

$= 2 + 4 + \frac{4}{5} + \frac{1}{4}$

$6 + \frac{16+5}{20}$

$= 6 + \frac{21}{20} = 6\frac{21}{20} = \frac{141}{20} = 7.05$

Answer: Length of both the laces is 7.05cm

3. Distance covered by bus: $3\frac{1}{6}$

Distance covered by Metro: $4\frac{2}{6}$

Total distance covered by Sam: Distance by bus + Distance by metro

$= 3\frac{1}{6} = 4\frac{2}{6} = 3 + 4 + \frac{1}{6} + \frac{2}{6} = 7 + \frac{1+2}{20} = 7 + \frac{3}{6} = 7\frac{3}{6}$

$= \frac{6 \times 7 + 3}{6} = \frac{45}{6} = 7.5$

Answer: Sam covered 7.5km distance together.

4. Length of first side: $6\frac{1}{3}$ cm

Length of second side: $3\frac{1}{3}$ cm

Length of third side: $2\frac{1}{3}$ cm

Length of fourth side: $1\frac{1}{3}$ cm

Total distance covered by them: Length of first + Length of second side + Length of third side + Length of fourth side

$= 6\frac{1}{3} + 3\frac{1}{3} + 2\frac{1}{3} + 1\frac{1}{3}$

$= 6 + \frac{1}{3} + 3 + \frac{1}{3} + 2\frac{1}{3} + 1\frac{1}{3}$

$= 12 + \frac{1+1+1+1}{3}$

$= 12 + \frac{4}{3} = 12\frac{4}{3} = \frac{12 \times 3 + 4}{3} = \frac{36+4}{3} = \frac{40}{3}$ cm.

Answer: Total length of four sides is $\frac{40}{3}$ cm.

5. Duration of English class: $5\frac{2}{3}$ hours

Duration of Maths class: $2\frac{1}{5}$ hours

Total duration of students studied in school: Duration fo English class + Duration of maths class

$= 5\frac{2}{3} + 2\frac{2}{5}$

$= 5 + \frac{2}{3} + 2 + \frac{2}{5} = 7 + \frac{2}{3} + \frac{2}{5} = 7 + \frac{10+3}{15}$

$= 7 + \frac{13}{15} = 7\frac{13}{15}$ hours

Answer: Student studied for $7\frac{13}{15}$ hours in school.

6. Quantity of sanitizer left in first bottle: $\frac{5}{12}l$

Quantity of sanitizer left in second bottle: $\frac{1}{12}l$

Quantity of sanitizer in both the bottles together:

$\frac{5}{12}l + \frac{1}{12}l = \frac{5+1}{12}l = \frac{6}{12}l$

$= 0.5l$

Answer: 0.5l of sanitizer would be there if the sanitizer is to be put in a single bottle.

Learning Updates

1. (a) Like (Same denominators)

(b) Unlike (Different denominators)

(c) Like (Same dnominators)

(d) Unlike (Different denominators)

2. (a) $\frac{9}{8}, \left(\frac{3}{4}\right), \frac{9}{5}, \left(\frac{7}{8}\right)$

(Denominator > Numerator)

(b) $7\frac{3}{5}, 2\frac{12}{7}, \left(\frac{7}{9}\right), \left(\frac{4}{5}\right)$

(Denominator > Numerator)

(c) $\left(\frac{6}{31}\right), \frac{35}{30}, \left(\frac{3}{29}\right), \frac{29}{28}$

(Denominator > Numerator)

3. (a) $\frac{23}{8}$

$8\overline{)23}$ quotient 2, -16, remainder 7

$\frac{23}{8} = 2\frac{7}{8}$

(Improper fraction = Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction)

(b) $\frac{16}{3}$

$3\overline{)16}$ quotient 5, -15, remainder 1

$\frac{16}{3} = 5\frac{1}{3}$

(Improper fraction = Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction)

(c) $\frac{25}{4}$

$4\overline{)25}$ quotient 6, -24, remainder 1

$\frac{25}{4} = 6\frac{1}{4}$

(Improper fraction = Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction)

(d) $\frac{37}{5}$

$$5\overline{)37}\ 7$$
$$-35$$
$$2$$

$\frac{37}{5} = 7\frac{2}{5}$

(Improper fraction = Quotient $\frac{\text{Remainder}}{\text{Divisor}}$ = Mixed fraction)

4. (a) $2\frac{1}{3} = \frac{3 \times 2 + 1}{3} = \frac{6 + 1}{3} = \frac{7}{3}$

(b) $2\frac{2}{5} = \frac{5 \times 2 + 2}{5} = \frac{10 + 2}{5} = \frac{12}{5}$

(c) $4\frac{3}{8} = \frac{8 \times 4 + 3}{8} = \frac{32 + 3}{8} = \frac{35}{8}$

(d) $6\frac{5}{9} = \frac{9 \times 6 + 5}{9} = \frac{54 + 5}{9} = \frac{59}{9}$

5. (a) $\frac{3}{4} = \frac{12}{\boxed{16}}$ We multiply 3 by 4 in order to make numerator 12. So, we multiply the denominator by 4.

Thus, $\frac{3}{4} = \frac{3}{4} \times \frac{4}{4} = \frac{12}{16}$

(b) $\frac{\boxed{8}}{2} = \frac{80}{20}$ We divide 20 by 10 in order to make denominator 2. So, we divide denominator by 10.

Thus, $\frac{80}{20} = \frac{80}{20} \div \frac{10}{10} = \frac{8}{2}$

(c) $\frac{1}{2} = \frac{\boxed{3}}{6}$ We multiply 2 by 3 in order to make denominator 6 So, we multiply the numerator by 3.

Thus, $\frac{1}{2} = \frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$

(d) $\frac{5}{7} = \frac{20}{\boxed{28}}$ We muliply 5 by 4 in order to make numerator 20. So, we multiply denominator by 4.

Thus, $\frac{5}{7} = \frac{5}{7} \times \frac{4}{4} = \frac{20}{28}$

6. (a) $2\frac{1}{2} = \frac{2 \times 2 + 1}{2} = \frac{5}{2}$

$2\frac{1}{2} \big/ \frac{5}{2}$ $\boxed{=}$ $\frac{5}{2}$ (Since 5 = 5)

(b) $2\frac{1}{3} = \frac{3 \times 2 + 1}{3} = \frac{5 + 1}{3} = \frac{7}{3}$

$\frac{4}{3}$ $\boxed{<}$ $\frac{7}{3} \big/ 2\frac{7}{3}$ (Since 7 > 4)

(c) $3\frac{3}{3} = \frac{3 \times 3 + 3}{3} = \frac{9 + 3}{3} = \frac{12}{3}$

$\frac{15}{3}$ $\boxed{>}$ $\frac{12}{3} \big/ 3\frac{3}{3}$ (Since, 15 > 12)

(d) $4\frac{3}{5} = \frac{4 \times 5 + 3}{5} = \frac{20 + 3}{5} = \frac{23}{5}$

$\frac{23}{5}$ $\boxed{=}$ $\frac{23}{5} \big/ 4\frac{3}{5}$ (Since 23 = 23)

7. (a) $\frac{7}{15} > \frac{3}{15} > \frac{2}{15} > \frac{1}{15}$ (Since 7 > 3 > 2 > 1)

(b) $\frac{7}{4} > \frac{5}{4} > \frac{3}{4} > \frac{1}{4}$ (Since 7 > 5 > 3 > 1)

(c) $\frac{5}{9} > \frac{4}{9} > \frac{3}{9} > \frac{2}{9}$ (Since 5 > 4 > 3 > 2)

8. (a) $\frac{1}{10} < \frac{3}{10} < \frac{5}{10} < \frac{6}{10}$ (Since 1 < 3 < 5 < 6)

(b) $\frac{3}{15} < \frac{4}{15} < \frac{6}{15} < \frac{8}{15}$ (Since 3 < 4 < 6 < 8)

(c) $\frac{2}{21} < \frac{3}{21} < \frac{4}{21} < \frac{5}{21}$ (Since 2 < 3 < 4 < 5)

9. (a) $\frac{10}{15}$

Factors of 10: 1, 2, 5 and 10

Factors of 15: 1, 3, 5 and 15

Common factors: 1, 5

$\frac{10 \div 5}{15 \div 5} = \frac{2}{3}$

(b) $\frac{24}{8}$

Factors of 24: 1, 2, 3, 4, 8, 12 and 24

Factors of 8: 1, 2, 4 and 8

Common factors: 1, 2, 4 and 8

$\frac{24 \div 2}{8 \div 2} = \frac{12 \div 4}{4 \div 4} = \frac{3}{1}$

(d) $\frac{16}{64}$

Factors of 16: 1, 2, 4, 8 and 16

Factors of 64: 1, 2, 4, 8, 16, 32 and 64

Common factor: 1, 2, 4, 8 and 16

$\frac{16 \div 2}{64 \div 2} = \frac{8 \div 8}{32 \div 8} = \frac{1}{4}$

(d) $\frac{56}{40}$

Factors of 56: 1, 2, 4, 7, 8, 14, 27 and 56

Factors of 40: 1, 2, 4, 5, 8, 10, 20 and 40

Common Factors: 1, 2, 4 and 8

$\frac{56 \div 2}{40 \div 2} = \frac{28 \div 4}{20 \div 4} = \frac{7}{5}$

10. (a) $\frac{2}{19} + \frac{9}{19} + \frac{11}{19}$

$= \frac{2+9+11}{19} = \frac{22}{19}$

(b) $\frac{1}{18} + \frac{2}{18} + \frac{3}{18}$

$= \frac{1+2+3}{18} = \frac{6}{18} = \frac{1}{3}$

(c) $\frac{11}{15} - \frac{3}{15}$

$= \frac{11-3}{15} = \frac{8}{15}$

(d) $8\frac{2}{5} - 3\frac{3}{5}$

$= \frac{8+2-3}{5} + \frac{3}{5} = 5 + \frac{2}{5} - \frac{3}{5} = 5 + \frac{2-3}{5} = 5 + \frac{-1}{5} = 5\frac{-1}{5} = \frac{24}{5}$

11. Length of lace used by the designer = $19\frac{5}{6}$ meters

Length of lace left on the roll = $18\frac{1}{6}$ meters

Total length of the lace: Length of lace used by the designer + length of lace left on the roll

$= 19 + \frac{5}{6} + 18 + \frac{1}{6} = 37 + \frac{5}{6} + \frac{1}{6}$

$= 37 + \frac{5+1}{6} = 37 + \frac{6}{6} = 37\frac{6}{6}$

$= \frac{37 \times 6 + 6}{6} = \frac{222+6}{6} = \frac{228}{6} = 38$

Answer: Total length of the lace is 38m.

Multiple Choice Questions

1. Total number of balls: 72

Total number of green balls: 18

Fraction of green balls:

$\frac{\text{Number of green balls}}{\text{Total number of balls}} = \frac{18}{72}$

Answer: (a) $\frac{18}{72}$

2. (b) Improper fraction (Since Numerator > Denominator)

3. (b) > (Since 3 > 1)

Skills Check

(a) Pizza Orange Pastry

$\frac{1}{3} > \frac{1}{4} > \frac{1}{12}$

(b) Pastry Pizza Orange

$\frac{1}{3} > \frac{1}{4} > \frac{1}{6}$

(c) Pizza Pastry Orange

$\frac{1}{3} > \frac{1}{6} > \frac{1}{12}$

(d) Pastry Orange Pizza

$\frac{1}{3} > \frac{1}{6} > \frac{1}{12}$

(e) Orange Pizza Pastry

$\frac{1}{3} > \frac{1}{6} > \frac{1}{12}$

7 Decimals

Exercise 7.1

1. (a) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{5}{10}$

Decimal = 0.5

(b) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{4}{10}$

Decimal = 0.4

(c) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{6}{10}$

Decimal = 0.6

2. (a) 0.1

(b) $\frac{4}{10}$

(c) 0.2

(d) $1\frac{2}{10} = \frac{10 \times 1 + 2}{10} = \frac{12}{10} = 1.2$

(e) $2\frac{2}{10} = \frac{10 \times 2 + 2}{10} = \frac{22}{10}$

(f) $6\frac{1}{10} = \frac{10 \times 6 + 1}{10} = \frac{61}{10} = 6.1$

3. (a) Zero point six

(b) Five point two

(e) Two point three

(d) Twelve point four

4. (a) 0.2

(b) 2.5

(c) 1.9

(d) 8.7

Exercise 7.2

1. (a) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{9}{100}$

Decimal = 0.09

(b) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{42}{100}$

Decimal = 0.42

(c) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{30}{100}$

Decimal = 0.30

(d) **Fraction** $\left(\frac{\text{Shaded parts}}{\text{Total parts}}\right) = \frac{25}{100}$

Decimal = 0.25

2. (a) $1 + \frac{6}{100} = 1.06$

(b) $1 + \frac{5}{100} = 1.05$

(c) $1 + \frac{2}{10} + \frac{14}{100}$

$= 1 + 0.2 + 0.14$

$= 1.34$

3.

		H	T	O	.	Tenths	Hundredths
(a)	0.08			0	.	0	8
(b)	0.47			0	.	4	7
(c)	1.27			1	.	2	7

4. (a) Zero point zero two

(b) Zero point eight two

(c) One point zero three

(d) Twenty-eight point eight seven

5. (a) $\frac{7}{100} = 0.07$ (b) $\frac{23}{100} = 0.23$

(c) $1 + \frac{2}{100} = 1.02$ (d) $2 + \frac{5}{100} = 2.05$

(e) $5 + \frac{40}{100} = 5.40$ (f) $2 + \frac{11}{100} = 2.11$

Exercise 7.3

1. (a) 0.4 (b) 0.94

(c) 0.07 (d) 1.97

(e) 8.08

2. (a) $\frac{7}{10}$ (b) $\frac{45}{100}$

(c) $\frac{71}{10}$ (d) $\frac{2763}{100}$

(e) $\frac{703}{100}$

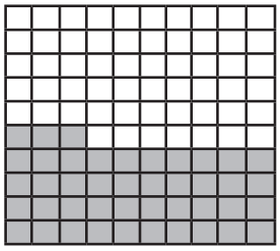
Learning Updates

1. (a) $\frac{4}{10} = 0.4$ (b) $\frac{8}{100} = 0.08$

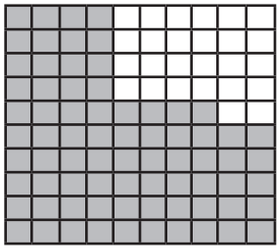
(c) $\frac{46}{100} = 0.46$

2. (a)

(b)



(c)



3. 0.6, 0.7, 0.8 (Adding 0.1 with each step)

4.05, 4.06, 4.07 (Adding 0.01 with each step)

4. (a) 1 (b) 2

(c) 2 (d) 2

5. (a) 0.3 (b) 0.06

(c) 0.15 (d) 1.4

(e) $6\frac{3}{100} = \frac{100 \times 6 + 3}{100} = \frac{603}{100} = 6.03$

6. (a) $\frac{605}{100}$ (b) $\frac{236}{100}$

(c) $\frac{501}{100}$ (d) $\frac{174}{10}$

(e) $\frac{2}{100}$

7. Length of first piece: 15m 95 cm

Length of second piece: 4m 95 cm

Length of first piece in decimal: 1m = 100cm

15m 95cm = 15 × 100cm + 95cm

= 1500 + 95cm

= 1595cm

$1\text{cm} = \frac{1}{100}\text{m}$

$1595\text{cm} = \frac{1595}{100}\text{m}$

= 15.95m

Length of second rope in decimal: 4m 5cm (1m = 100cm)

4m 5cm = 4 × 100cm + 5cm

= 400cm + 5cm

= 405cm

$1\text{cm} = \frac{1}{100}\text{m}$

$= 405\text{cm} = \frac{405}{100}\text{m}$

= 4.05m

8. (a) 10

(b) (i)

Fraction: $\frac{\text{Number of Green rectangles}}{\text{Total number of colored rectangles}} = \frac{3}{10}$

Decimal = 0.3

(ii)

Fraction: $\frac{\text{Number of blue rectangles}}{\text{Total number of colored rectangles}} = \frac{4}{10}$

Decimal = 0.4

(iii)

Fraction: $\frac{\text{Number of red rectangles}}{\text{Total number of colored rectangles}} = \frac{3}{10}$

Decimal = 0.3

8 Geometry

Exercise 8.1

1. (a) Point A

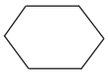
(b) Line $\overline{UV}$ [No ending points]

(c) Ray $\overrightarrow{XW}$ [One ending point]

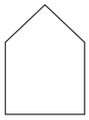
(d) Line Segment $\overline{BC}$ [Both ending points]

2. (a) 

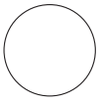
Answer: 4

(b) 

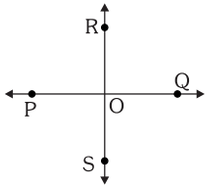
Answer: 6

(c) 

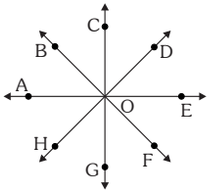
Answer: 5

(d) 

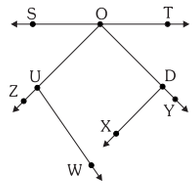
Answer: 0

3. (a) 

Answer: $\overrightarrow{OQ}$, $\overrightarrow{OR}$, $\overrightarrow{OP}$, $\overrightarrow{OS}$

(b) 

Answer: $\overrightarrow{OA}$, $\overrightarrow{OB}$, $\overrightarrow{OC}$, $\overrightarrow{OD}$, $\overrightarrow{OE}$, $\overrightarrow{OF}$, $\overrightarrow{OG}$, $\overrightarrow{OH}$

(c) 

Answer: $\overrightarrow{OS}$, $\overrightarrow{OT}$, $\overrightarrow{OZ}$, $\overrightarrow{DY}$, $\overrightarrow{UZ}$, $\overrightarrow{UW}$, $\overrightarrow{OY}$, $\overrightarrow{DX}$

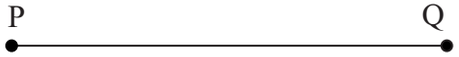
Exercise 8.2

1. (a) 

Answer: 5cm

(b) 

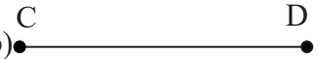
Answer: 6cm

(c) 

Answer: 7cm

2. (a) 

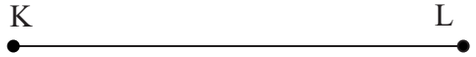
Answer: $\overline{AB}$ = 2cm

(b) 

Answer: $\overline{CD}$ = 5cm

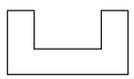
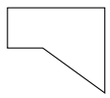
(c) 

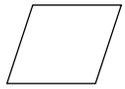
Answer: $\overline{EF}$ = 5.5cm

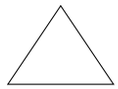
(d) 

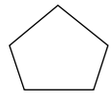
Answer: $\overline{KL}$ = 7cm

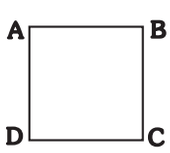
Exercise 8.3

1. (b)  (e)  (h) 

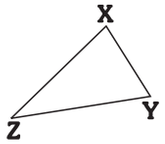
2. (b)  Quadrilateral

(c)  Triangle

(h)  Pentagon

3. (a) 

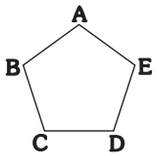
Answer: AB, BC,CD, DA

(b) 

Answer: XY,YZ,ZX

(c) 

Answer: MN, NO, OP, QR, RM

(d) 

Answer: AB, BC, CD, DE, EA

4. (a) False

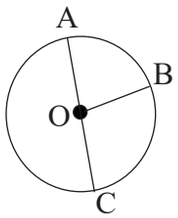
(b) False

(c) True

(d) True

(e) False

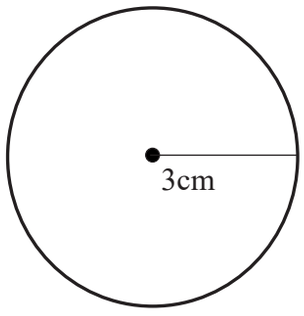
Exercise 8.4

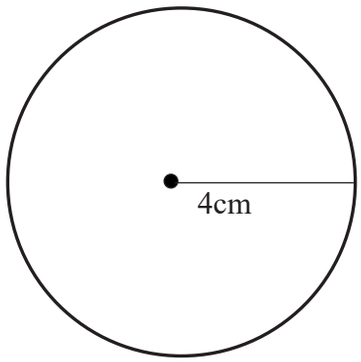
1. 

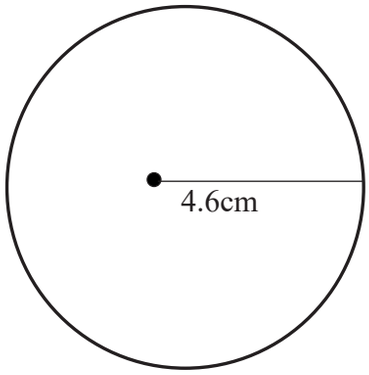
(a) Centre: O

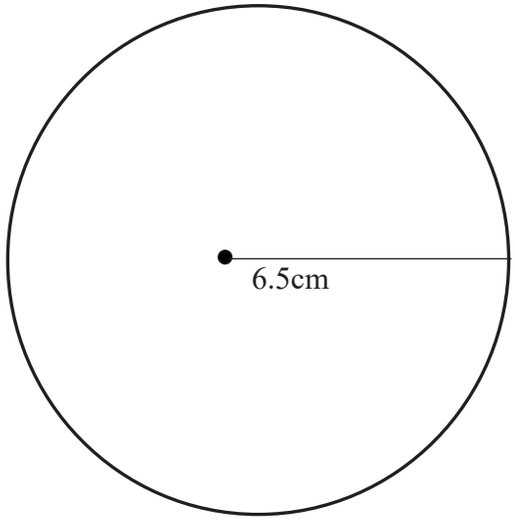
(b) Radius: OB, OA, OC

(c) Diameter: AC

2. (a) 

(b) 

(c) 

(d) 

3. Radius = $\frac{\text{Diameter}}{2}$

(a) $\frac{24}{2}$cm = 12cm

(b) $\frac{40}{2}$cm = 20cm

(c) $\frac{28}{2}$cm = 14cm

(d) $\frac{64}{2}$cm = 32cm

(e) $\frac{18}{2}$cm = 9cm

4. Diameter 2 × radius

(a) 5 × 2cm = 10cm

(b) 6 × 2cm = 12cm

(c) 9 × 2cm = 18cm

(d) 7 × 2m = 14m

5. (a) True

(b) True

(c) True

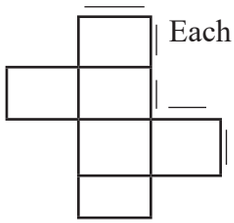
(d) False

(e) False

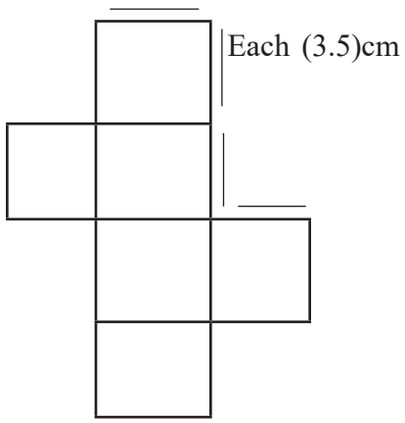
(f) True

Exerise 8.5

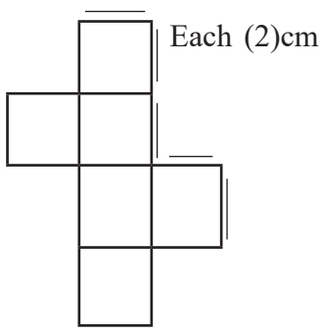
1. (a)



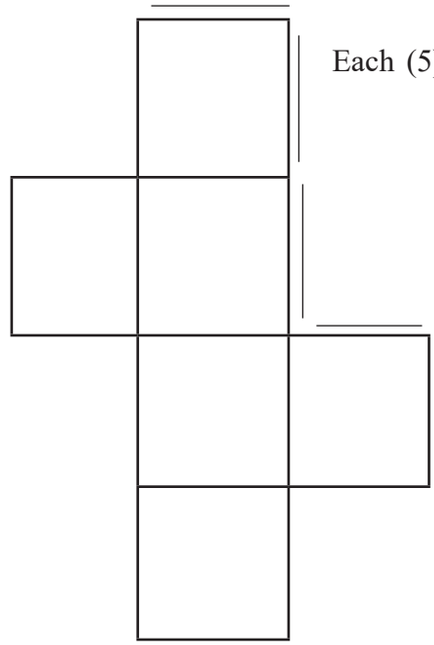
(b)



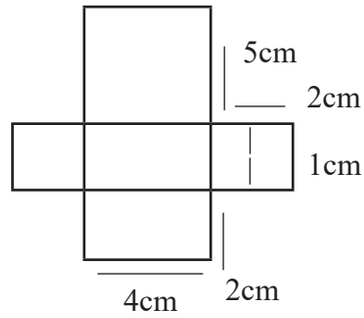
(c)



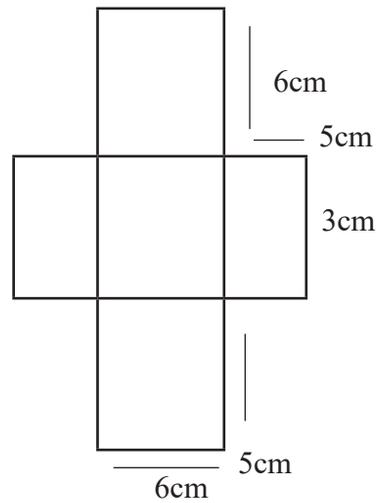
(d)



2. (a)



(b)

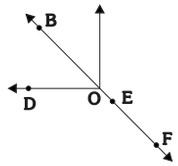


3.

	Name of shape	Number of Surface (S)	No. of plane surface (s)	No. of curved surface (s)	Number of edges	Number of vertices
(a)	Sphere	1	0	1	0	0
(b)	Hemisphere	2	1	1	2	0
(c)	Cube	6	6	0	12	8
(d)	Cuboid	6	6	0	12	8
(e)	Cyclinder	3	2	1	2	0
(f)	Cone	2	1	1	1	1

Lerning Updates

1.

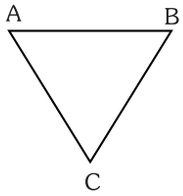


(a) O, B, E, D, F

(b) $\overrightarrow{BF}$

(c) $\overrightarrow{OD}$, $\overrightarrow{OB}$, $\overrightarrow{EB}$, $\overrightarrow{EF}$

2. (a)

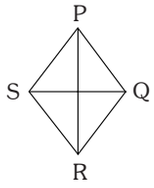


AB = 2 cm

BC = 2 cm

AC = 2 cm

(b)



PQ = 1 cm

QR = 1 cm

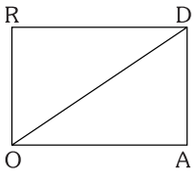
RS = 1 cm

PS = 1 cm

SQ = 1.5 cm

PR = 1.5 cm

(c)



RD = 2.5 cm

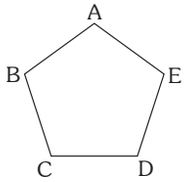
AD = 2.2 cm

OA = 2.5 cm

OR = 2.2 cm

OD = 3 cm

(d)



AB = 1.7 cm

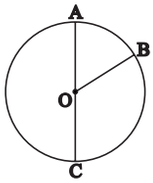
BC = 2 cm

CD = 1.7 cm

DE = 2 cm

AE = 1.7 cm

3.



(a) O = Centre

(b) $\overline{OA}$ = Radius

(c) $\overline{OB}$ = Radius

(d) $\overline{OC}$ = Radius

4.

Radius $\frac{1}{2}$ of diameter	10cm	$\frac{1}{2} \times 4.8$ $= 2.4$cm	$\frac{13}{3} \times \frac{1}{2}$ $= \frac{13}{6}$ cm	$5\frac{2}{4} = \frac{22}{4}$	$\frac{1}{2} \times 6$cm $= 3$cm
Diameter = 2 × Radius	2×10 $= 20$cm	4.8	$4\frac{1}{3}$cm $= \frac{13}{3}$cm	$2 \times \frac{22}{4}$cm $= 11$cm	6cm

Multiple Choice Question

1. (b) 0 as circle has number line segments

2. (a) 4

3. (b) point

4. (b) cuboid

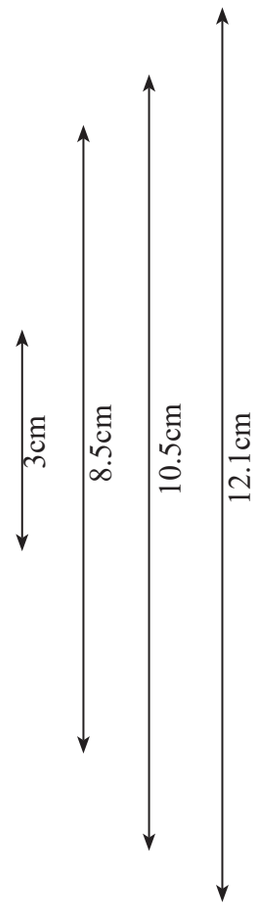
5. (c) Hemisphere

6. (d) Diameter

9 Mesurement

Get Started

1.



Exercise 9.1

1. (a) 10km into m

1km = 1000m

So, 10km = 10 × 1000m

= 10000m

(b) 14 km into m

1km = 1000m

So, 14km = 14 × 1000m

= 14000m

(c) 25km into m

1km = 1000m

So, 25km = 25 × 1000m

= 25000m

(d) 86km into m

1km = 1000m

86km = 86 × 1000m

= 86000m

(e) 8km into 412m

1km = 1000m

8km into 412m = 8 × 1000m + 412m

= 8000m + 412m

= 8412m

(f) 36km 42m

1km = 1000m

36km 42m = 36 × 1000m + 42m

= 36000m + 42m

= 36042m

(g) 57 km 18m

1km = 1000m

57km 18m = 57 × 1000m + 18m

= 57000m + 18m

= 57018m

2. (a) 15m into dm

1m = 10dm

15m = 15 × 10dm

= 150dm

(b) 16m into dm

1m = 10dm

16m = 16 × 10dm

= 160dm

(c) 49m into dm

1m = 10dm

49m = 49 × 10dm

= 490dm

(d) 512m into dm

1m = 10dm

512m = 512 × 10dm

= 5120dm

(e) 22m 8dm into cm

1m = 10dm

22m 8dm = 22 × 10dm + 8dm

= 220dm + 8dm

= 228dm

(f) 18m 9dm into cm

1m = 10dm

18m 9dm = 18 × 10 dm + 9dm

= 180dm + 9dm

= 189dm

(g) 109m 3dm

1m = 10dm

109m 3dm = 109 × 10dm + 3dm

= 1090dm + 3dm

= 1093dm

3. (a) 8m into cm

1m = 100cm

8m = 8 × 100cm

= 800cm

(b) 14m into cm

1m = 100cm

14m = 14 × 100cm

14m = 14 × 100cm

= 1400cm

(c) 73m into cm

1m = 100cm

73m = 73 × 100cm

= 7300cm

(d) 160m into cm

1m = 100cm

160m = 160 × 100cm

= 16000cm

(e) 17m 40cm into cm

1m = 100cm

17m 40cm = 17 × 100cm + 40

1700cm + 40cm = 1740m

(f) 18m 82cm into m

1m = 100cm

18m 82cm = 18 × 100cm + 82cm

= 1800cm + 82cm

= 1882cm

(g) 20m 5cm

1m = 100cm

20m 5cm = 20 × 100cm + 5cm

= 5000cm + 5cm

= 2005cm

4. (a) 12cm into mm

1cm = 10mm

12cm = 12 × 10mm

= 120mm

(b) 40cm into mm

1cm = 10mm

40cm = 40 × 10mm

= 400mm

(c) 25cm into mm

25cm = 25 × 10mm

= 250mm

(d) 160cm into mm

1cm = 10mm

160cm = 160 × 10mm

= 1600mm

(e) 16cm 5mm

1cm = 10mm

16cm 5mm = 16 × 10mm + 5mm

= 160 + 5mm

= 165mm

(f) 30cm into 8mm

1cm = 10mm

30 cm 8mm = 30 × 10mm + 8mm

= 300mm + 8mm

= 308mm

(g) 12cm into 8mm

1cm = 10mm

12cm 8mm = 12 × 10mm + 8mm

= 120mm + 8mm

= 128mm

5. (a) 1km 1hm 4dam 8m into m

1km = 1000m, 1hm = 100m 1dam = 10m

1km 1hm 4dam 8m = 1 × 1000m + 1 × 100m + 4 × 10m + 8m

= 1000m + 100m + 40m + 8m

= 1148m

(b) 10km 6hm 7dam 4m into m

10km 6hm 7dam 4m = 10 × 1000m + 6 × 100m + 7 × 10m + 4m

= 10000m + 600m + 70m + 4m

= 10674m

Exercise 9.2

1. (a) 95 mm into cm

$1mm = \frac{1}{10}cm$

95mm = 90mm + 5mm

$= \frac{90}{10}cm + 5mm$

= 9cm 5mm

(b) 75mm into cm

$1mm = \frac{1}{10}cm$

75mm = 70mm + 5mm

$= \frac{70}{10}cm + 5mm$

= 7cm 5mm

(c) 55mm into cm

$1mm = \frac{1}{10}cm$

55mm = 50mm + 5mm

$= \frac{50}{10}cm = 5mm$

= 5cm 5mm

(d) 64mm into cm

$1mm = \frac{1}{10}cm$

$64mm = 60mm + 4mm = \frac{60}{10}cm + 4mm$

= 6cm 4mm

2. (a) 686 cm into m and cm

$1cm = \frac{1}{100}m$

686m = 600cm + 86cm

$= \frac{600}{100}m + 86cm$

= 6m 86cm

(b) 325cm into m and cm

$1cm = \frac{1}{100}m$

325cm = 300cm + 25cm

$= \frac{300}{100}m + 25cm$

= 3m 25cm

(c) 825cm into m and cm

$1cm = \frac{1}{100}m$

825cm = 800cm + 25cm

$= \frac{800}{100}m + 25cm$

= 8m 25cm

(d) 798cm into m and cm

$1cm = \frac{1}{100}m$

789cm = 700cm + 98cm

$= \frac{700}{100}m + 98cm$

= 7m 98cm

(e) 768cm into m and cm

$1cm = \frac{1}{100}m$

768cm = 700cm + 68cm

$= \frac{700}{100}m + 68cm$

= 7m 68cm

(f) 479cm into m and cm

$1cm = \frac{1}{100}m$

= 479cm = 400cm + 79cm

$= \frac{400}{100}m, + 79cm$

= 4m 79cm

(g) 7666cm into m and cm

$1cm = \frac{1}{100}m$

7666cm = 7600cm + 66cm

$= \frac{7600}{100}m + 66cm$

= 76m 66cm

(h) 4333cm into m and cm

$1cm = \frac{1}{100}m$

4333 cm = 4300cm + 33cm

$= \frac{4300}{100}m + 33cm$

= 43m 333cm

3. (a) 8000m into km

$1m = \frac{1}{1000}km$

$8000m = \frac{8000}{1000}km$

= 8km

(b) 15000m into km

$1m = \frac{1}{1000}km$

$15000m = \frac{15000}{1000}$

= 15km

(c) 79000m into km

$1m = \frac{1}{1000}km$

$79000m = \frac{79000}{1000}km$

= 79km

(d) 45000m into km

$1m = \frac{1}{1000}km$

$45000m = \frac{45000}{1000}km$

= 45km

4. $1mm = \frac{1}{1000}mm$

9590mm = 9000mm + 590mm

$= \frac{9000}{1000}m + 5900mm$

= 9mm + 590mm

= 9m 590mm

5. Length of road: 10556m

$1m = \frac{1}{1000}km$

10556m = 10000m + 556m

$= \frac{10000}{1000}km + 556m$

= 10km + 556

= 10km 556m

6. Distance Shelly walked: 1712m

$1m = \frac{1}{1000}km$

1712m = 1000m + 712m

$= \frac{1000}{1000}km + 712m$

= 1km 712m

Exercise 9.3

1. (a)

km		m			cm	
(1)		(1)	(1)	(1)	(1)	
3	3	1	7	5	4	2
2	3	1	0	4	5	4
+ 0	4	0	8	1	0	9
6	0	3	6	1	0	5

Answer: 60km 36m 5cm

(b)

m			cm		mm
	(1)	(1)	(1)	(1)	
1	0	4	3	8	6
2	4	1	4	3	5
+ 0	2	8	9	1	8
3	7	4	7	3	9

Answer: 37m 73cm 9mm

(c)

km		m			cm		mm
(1)		(1)	(2)	(1)	(1)		
1	5	2	1	8	4	3	2
3	6	1	4	8	3	7	4
+ 4	3	4	3	3	7	2	2
9	4	8	0	0	5	2	8

Answer: 94km 800m 52cm 8mm

2. (a)

m		cm	
(1)		(1)	
1	8	6	6
+ 0	8	5	6
2	7	2	2

Answer: 27m 22cm

(b)

m		cm	
	(1)	(1)	
6	4	6	4
+ 1	4	6	9
7	9	3	3

Answer: 79m 33cm

(c)

km		m		
(1)		(1)	(1)	
5	6	0	6	5
+ 2	6	0	7	5
8	2	1	4	0

Answer: 82km 140m

(d)

km		m		
(2)		(1)	(1)	
1	8	0	3	6
0	9	0	2	6
+ 3	8	0	7	7
6	5	1	3	9

Answer: 65km 139cm

km		m	
(2)	(1)	(1)	
1	8	3	6
0	9	2	6
+ 3	8	7	7
6	6	3	9

Answer: 66km 39m

3. (a)

km			m		
(2)		(16)	(10)		
		~~6~~	~~0~~	(10)	
1	2	~~7~~	1	~~0~~	8
– 1	8		3	5	7
0	8		7	5	1

Answer: 8km 751m

(b)

km		m		mm
(2)		(9)		
	(3)	~~10~~	(13)	
4	~~4~~	~~0~~	~~3~~	8
– 1	0	9	8	8
3	3	0	5	0

Answer: 33m 5cm 0mm

(c)

km			m			cm	
			(15)	(12)	(10)		
			(3)	~~5~~	~~2~~	~~0~~	(13)
1	8	7	~~4~~	~~6~~	~~3~~	~~1~~	~~3~~
–	4	6	1	8	7	2	7
1	4	1	2	7	5	8	6

Answer: 141km 275m 86cm

4. (a)

m		cm	
	(8)	(12)	
5	~~9~~	~~2~~	0
– 5	6	4	0
0	2	8	0

Answer: 2m 80cm

(b)

km		m	
	(14)	(14)	
(5)	~~4~~	~~4~~	(3) (17)
~~6~~	~~5~~	~~5~~	~~4~~ ~~7~~
–	7	8	6 9
5	7	6	7 8

Answer: 576m 78cm

(c)

km		m		
	(18)	(11)	(9)	
(8)	~~8~~	~~1~~	~~10~~	(15)
~~9~~	~~9~~	~~2~~	~~0~~	~~5~~
– 5	9	3	3	6
3	9	8	6	9

Answer: 39km 869m

(d)

km		m		
	(17)	(9)		
(4)	~~7~~	~~10~~	(17)	
~~5~~	~~8~~	~~0~~	~~7~~	5
– 1	9	2	8	0
3	8	7	9	5

Answer: 38km 795m

5. Total length of the roll: 18m 14cm

Total length of piece cutted from the roll: 8m 42cm

Length of wool left on the roll: Total length of the roll – Length of piece cutted from the rope

= 18m 14cm – 8m 42cm

m		cm	
	(17)		
	~~7~~	(10)	
~~1~~	~~8~~	~~1~~	4
–	8	4	2
0	9	7	2

Answer: Length of the wool left on the roll is 9m 72cm

6. Distance travelled by John on train: 18km 326m

Distance travelled by John on bus: 78km 228m

Distance travelled by John on car: 8km 605m

Total Distance travelled by John: Distance travelled by train + Distance travelled by bus + Distance travelled by car.

= 18km 326m + 78km 228m + 8km 605m.

km			m		
	(2)	(1)		(1)	
	1	8	3	2	6
	7	8	2	2	8
+	0	8	6	0	5
1	0	5	1	5	9

Answer: Total distance covered by John is 105km 159m.

7. Distance from home to auto stand = 375m

Distance covered by auto: 6km 548m

Distance travelled while returning home = Distance from home to auto and + Distance covered by auto

km	m		
	(1)	(1)	
6	5	4	8
+	3	7	5
6	9	2	3

Total distance covered: 6km 548m + 375m = 6km 923m

Distance from home to auto stand + Distance covered by auto + Distance covered while returning home

= 375 + 6km 548m + 6km 923m

= 6km 923 + 6km 923m

= 13km 846m

km		m		
	(1)	(1)		
	6	9	2	3
+	6	9	2	3
1	3	8	4	6

Answer: Total distance traveled by Samarth on Tuesday is 13km 846m.

8. Total length of lace: 850m

Length of lace used for stiching: 195m 40cm

Length of lace left on the roll: Total length of lace – lace used from stiching

= 850m – 195m 40cm

= 654m 60cm

m			cm	
	(14)	(9)		
(7)	~~4~~	~~10~~	(10)	
~~8~~	~~5~~	~~0~~	~~0~~	0
– 1	9	5	4	0
6	5	4	6	0

Answer: 654m 60cm of lace is left on roll.

Exercise 9.4

1. (a) 8kg

1kg = 1000g

8kg = 8 × 1000g

= 8000g

(b) 36kg

1kg = 1000g

36kg = 36 × 1000g

= 36000g

(c) 315 kg

1kg = 1000g

315kg = 315 × 1000g

= 315000g

(d) 420 kg

1kg = 1000g

420kg = 420 × 1000g

= 420000g

(e) 8kg 242g

1kg = 1000g

8kg 242g = 8 × 1000g + 242g

= 8000g + 242g

= 8242g

(f) 19kg 20g

1kg = 1000g

19kg 20g = 19 × 1000g + 20g

= 19000g + 20g

= 19020g

(g) 18kg 6g

1kg = 1000g

18kg 6g = 18 × 1000g + 6g

= 18000g + 6g

= 18006g

(h) 45kg 350g

1kg = 1000g

45kg 350g = 45 × 1000g + 350g

= 45000g + 350g

= 45350g

2. (a) 7g

1g = 1000mg

7g = 7 × 1000mg

= 7000mg

(b) 46g

1g = 1000mg

46g = 46 × 1000mg

= 46000mg

(c) 740g

1g = 1000mg

= 740g = 740 × 1000mg

= 74000mg

(d) 946g

1g = 1000mg

946g = 946 × 1000mg

= 946000mg

(e) 8g 360mg

1g = 1000mg

8g 360mg = 8 × 1000mg + 360mg

= 8000mg + 360mg

= 8360mg

(f) 25g 13mg

1g = 1000mg

25g 13mg = 25 × 1000mg + 13mg

= 25000mg + 13mg

= 25013mg

(g) 140g 9mg

1g = 1000mg

140g 9mg = 140 × 1000mg + 9mg

= 140000mg + 9mg

= 140009mg

(h) 24g 203mg

1g = 1000mg

24g 203mg = 24 × 1000mg + 203mg

= 24000mg + 203mg

= 24203mg

3. (a) 8kg 1hg 4dag 5g

1 kg = 1000g, 1hg = 100g 4dag = 10g

8kg 1hg 4dag 5g = 8 × 1000g + 1 × 100g + 4 × 10g + 5g

= 8000g + 100g + 40g + 5g

= 8145g

(b) 20kg 5hg 9dag 5g into g

1 kg = 1000g, 1hg = 100g 4days = 10g

= 20kg 5hg 9dag 5g = 20 × 1000g + 5 × 100g + 9 × 10g + 8g

= 20000g + 500g + 90g + 8g

= 20598g

4. Mass of Samartha's cat: 6kg

Mass of Pihu's cat: 2kg 250g

Mass of both cats: Mans of Samartha's cat + Mars of Pihu's Cat

= 6kg + 2kg 250g

= 8kg 250g

1kg = 1000g

8kg 250g = 8 × 1000g + 250g

= 8000g + 250g

= 8250g

Answer: Mass of both cats in gram is 8250g.

Exercise 9.5

1. (a) 9000g

$1g = \frac{1}{1000}$ kg

$9000g = \frac{9000}{1000}$kg

$= 9kg$

(b) 8000g

$1g = \frac{1}{1000}$ kg

$8000g = \frac{8000}{1000}$kg

$= 8kg$

(c) 36000g

$1g = \frac{1}{1000}$ kg

$36000g = \frac{36000}{1000}$ kg

$= 36kg$

(d) 28000kg

$1g = \frac{1}{1000}$ kg

$28000g = \frac{28000}{1000}$

$= 28kg$

2. (a) 740 into kg and g

$1g = \frac{1}{1000}$ kg

$= 7400g = 7000g + 400g$

$= \frac{7000}{1000}$ kg + 400g

$= 7kg\ 400g$

(b) 4325g into kg and g

$1g = \frac{1}{1000}$ kg

$= 4325g\ 4000g + 325g$

$= \frac{4000}{1000}$kg + 325g

$= 4kg\ 325g$

(c) 8908g into kg and g

$1g = \frac{1}{1000}$ kg

$8908g = 8000g + 908g$

$= 8kg\ 908g$

(d) 5065g into kg and g

$5065g = 5000g + 65g$

$= \frac{5000}{1000}$kg + 65g

$= 5kg\ 65g$

3. (a) 5606g into g and kg

$1mg = \frac{1}{1000}$g

$5606 = 5000mg + 606mg$

$= \frac{5000}{1000}$g + 606mg

$= 5g\ 606mg$

(b) 6462 mg into g and mg

$1mg = \frac{1}{1000}$g

$6462mg = 6000mg + 462mg$

$= \frac{6000}{1000}$g + 462mg

$= 6g\ 462mg$

(c) 5697mg into g and mg

$1mg = \frac{1}{1000}$g

$5697mg = 5000mg + 697mg$

$= \frac{5000}{1000}$g + 697mg

$= 5g\ 697mg$

(d) 37980mg into g and mg

$1mg = \frac{1}{1000}$g

$37980mg = 37000mg + 980mg$

$3798mg = \frac{37000}{1000}$ g + 980mg

$37g + 980mg$

$37g\ 980mg$

(e) 88990mg into g and mg

$1mg = \frac{1}{1000}$g

$88970mg = 88000mg + 970mg$

$= \frac{88000}{1000}$ g + 970mg

$= 88g\ 970mg$

(f) 45000mg into g and mg

$1mg = \frac{1}{1000}g$

$45000mg = \frac{45000}{1000}g$

$= 45g$

4.

Fruit	Vitamin A	
	g	**mg**
Carrot	4g 92mg	1g = 1000mg 4g 92mg = 4 × 1000mg + 92mg = 4000mg + 92mg = 4092mg
Banana	6g 190mg	1g = 1000mg 6g 190mg = 6 × 1000mg + 190mg = 6000mg + 190mg = 6190mg
Apple	3g 946mg	1g = 1000mg 3g 946mg = 3 × 1000mg + 946mg = 3000mg + 946mg = 3946mg

Fruit	Vitamin B	
	g	**mg**
Carrot	2g 6mg	1g = 1000mg 2g 6mg = 2 × 1000mg + 6mg = 2006mg
Banana	2g 253mg	1g = 1000mg 2g 253mg = 2 × 1000mg + 253mg = 2000mg + 253mg = 2253mg
Apple	3g 990mg	1g = 1000mg 3g 990mg = 3 × 1000mg + 990mg = 3000mg + 990mg = 3990mg

Fruit	Vitamin C	
	g	**mg**
Carrot	1g 23mg	1g = 1000mg 1g 23mg = 1 × 1000mg + 23mg = 1023mg
Banana	1g 480mg	1g = 1000mg 1g 480mg = 1 × 1000mg + 480mg = 1000mg + 480mg = 1480mg
Apple	4g 540mg	1g = 1000mg 4g 540mg = 4 × 1000mg + 540mg = 4000mg + 540mg = 4540mg

Exercise 9.6

1. (a)

	kg			g		
	4	0	0	0	0	0
+	2	8	7	2	0	4
	6	8	7	2	0	4

Answer: 687kg 204g

(b)

	kg			g		
	(1)	(1)				
	2	4	4	5	5	0
+	1	7	8	0	0	4
	4	2	2	5	5	4

Answer: 422kg 554g

(c)

	kg			g		
				(1)		
	6	0	0	5	4	0
+	2	3	9	2	6	1
	8	3	9	8	0	1

Answer: 839kg 801

2. (a)

	kg		g		
	(1)	(1)	(1)	(1)	
	4	6	9	4	8
+	1	3	6	6	6
	6	0	6	1	4

Answer: 60kg 614g

(b)

kg		g		
(1)	(1)	(1)		
1	6	4	3	0
+ 2	7	5	7	0
4	4	0	0	0

Answer: 44kg

(c)

kg		g		
(1)	(1)	(1)		
3	5	5	8	5
+ 4	8	8	9	4
8	4	4	7	9

Answer: 84kg 479g

(d)

g			mg		
(1)		(1)	(1)		
3	7	0	8	7	0
+ 1	4	0	5	5	0
5	1	1	4	2	0

Answer: 511g 420mg

3. (a)

kg			g		
	(13)			(12)	
(2)	~~3~~	(10)	(4)	~~2~~	(10)
~~3~~	~~4~~	~~0~~	~~5~~	~~3~~	~~0~~
− 1	7	5	2	9	9
1	6	5	2	3	1

Answer: 165kg 231g

(b)

kg			g		
			(12)	(10)	
(1)	(10)	(8)	~~2~~	~~0~~	(10)
~~2~~	~~0~~	~~9~~	~~3~~	~~1~~	~~0~~
− 0	4	5	3	7	5
1	6	3	9	3	5

Answer: 163kg 935g

(c)

kg			g		
	(9)	(9)	(9)	(9)	
(6)	~~10~~	~~10~~	~~10~~	~~10~~	(10)
~~7~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
− 4	9	5	8	2	5
2	0	4	1	7	5

Answer: 204kg 175g

4. (a)

kg			g		
	(13)	(9)	(11)		
(5)	~~3~~	~~10~~	~~1~~	(10)	
~~6~~	~~4~~	~~0~~	~~2~~	~~0~~	
− 5	6	0	3	6	
0	7	9	8	4	

or

kg		g	
	(13)	(11)	
(5)	~~3~~	~~1~~	(10)
~~6~~	~~4~~	~~2~~	~~0~~
− 5	6	3	6
0	7	8	4

Answer: 7kg 984g or **Answer:** 7kg 84g

(b)

kg			g		
		(9)			
	(7)	~~10~~	(10)	(8)	(10)
5	~~8~~	~~0~~	~~0~~	~~9~~	~~0~~
− 3	2	0	7	5	6
2	5	9	3	3	4

Answer: 259kg 334g

(c)

kg		mg		
		(2)	(18)	
5	8	~~3~~	~~8~~	9
− 4	0	0	9	0
1	8	2	9	9

Answer: 18kg 299g

(d)

g		mg		
		(10)	(15)	
	(6)	~~0~~	~~5~~	(10)
5	~~7~~	~~1~~	~~6~~	~~0~~
− 4	4	2	7	5
1	2	8	8	5

Answer: 12kg 885g

5. (a) Strawberry and Apple box makes a total mass of 41kg 600g

kg		g		
(1)				
2	5	4	0	0
+ 1	6	2	0	0
4	1	6	0	0

25kg 400g + 16kg 200g
= 41kg 600g

(b) Orange Box and Apple box have a total mass less than 30kg.

13kg 725g + 16kg 200g < 30kg

	kg		g		
	1	3	7	2	5
+	1	6	2	0	0
	2	9	9	2	5

= 29kg 925g < 30kg

(c) Total mass of all six boxes = 25kg 400g + 13kg 725g + 22kg 85 + 20kg 70g + 16kg 200g + 18kg 675g

= 116kg 155g

	kg		g		
	(2)	(2)	(2)	(1)	
	2	5	4	0	0
	1	3	7	2	5
	2	2	0	8	5
	2	0	0	7	0
	1	6	2	0	0
+	1	8	6	7	5
1	1	6	1	5	5

(d) Box with maximum mass strawberry box: 25kg 400g

Box with minimum mass orange box: Orange box 13kg 725g

Difference between boxes with maximum and minimum mass = 25kg 400g – 13kg 725g

= 11kg 675

	kg		g		
			(13)	(9)	
		(4)	~~3~~	~~10~~	(10)
	2	~~5~~	~~4~~	~~0~~	~~0~~
–	1	3	7	2	5
	1	1	6	7	5

Exercise 9.7

1. (a) 36k*l* into *l*

1k*l* = 1000*l*

36k*l* = 36 × 1000*l*

= 36000***l***

(b) 20k*l* into *l*

1k*l* = 1000*l*

20k*l* = 20 × 1000*l*

= 20000*l*

(c) 166k*l* into *l*

1k*l* = 1000*l*

166k*l* = 166 × 1000*l*

= 166000*l*

(d) 11k*l* 470l into *l*

1k*l* = 1000*l*

11k*l* 470*l* = 11 × 1000*l* + 470*l*

= 11000*l* + 470*l*

= 11470*l*

(e) 64k*l* 65*l* into *l*

1k*l* = 1000*l*

64k*l* 65*l* = 64 × 1000*l* + 65*l*

= 64000*l* + 65*l*

= 64065*l*

(f) 415k*l* 8*l* into *l*

1k*l* = 1000*l*

415k*l* 8*l* = 415 × 1000*l* 8*l*

= 415000*l* + 8*l*

= 415008*l*

(g) 5k*l* 9h*l* 5dal 4*l* into *l*

1k*l* = 1000*l*, 1h*l* = 100*l*, 1dal = 10*l*

= 5k*l* 9h*l* 5dal 4*l* = 5 × 1000*l* + 9 × 100*l* + 5 × 10*l* + 4*l*

= 5000*l* + 900*l* + 50*l* + 4*l*

= 5954*l*

(h) 18k*l* 6h*l* 5dal 3*l* into *l*

1k*l* = 1000*l*, 1h*l* = 100*l*, 1dal = 10*l*

18k*l* 6h*l* 5dal 3*l* = 18 × 1000*l* + 6 × 100*l* + 5 × 10*l* + 3*l*

= 18000*l* + 600*l* + 50*l* + 3*l*

= 18653*l*

2. (a) 14*l* into *l*

1*l* = 1000m*l*

14*l* = 14 × 100m*l*

= 14000m*l*

(b) 17l into ml

1kl = 1000l

17l = 17 × 1000ml

= 17000ml

(c) 10l into ml

1l = 1000ml

10l = 10 × 1000ml

= 10000ml

(d) 25l 350ml into ml

1kl = 1000l

25l 350ml = 25 × 1000ml + 350ml

= 25000ml + 350ml

= 25350ml

(e) 26l 40ml into ml

1kl = 1000l

26l 40ml = 26 × 1000ml + 40ml

= 26000ml + 40ml

= 26040ml

(f) 117l 580ml into ml

1kl = 1000l

117l 580ml = 117 × 1000ml + 580ml

= 117000ml + 580ml

= 117580ml

3. (a) 14000l into kl

$1l = \frac{1}{1000}$ kl

$14000l = \frac{14000}{1000}kl$

= 14kl

(b) 1300l into kl

$1l = \frac{1}{1000}$ kl

$1300l = \frac{1300}{1000}kl$

= 1.3kl

(c) 6752l into kl

$1l = \frac{1}{1000}$ kl

$6752l = \frac{6752}{1000}$ kl

= 6. 752l

4. (a) 4400ml into l and ml

1l = 1000ml

4400ml = 4000ml + 400ml

$= \frac{4000}{1000}l$ + 400ml

= 4l 400ml

(b) 8856ml int l and ml

1l = 1000ml

8856ml = 8000ml + 856ml

$= \frac{8000}{1000}l$ + 856ml

= 8l 856ml

(c) 8767ml into l and ml

1l = 1000ml

8767ml = 8000ml + 767ml

$= \frac{8000}{1000}l$ + 767ml

= 8l 767ml

5. (a) 2l = 2l × 1000ml

1l = 1000ml

= 2000ml

(b) 2.5l = 2.5l × 1000ml

1l = 1000ml

= 2500ml

(c) 4.5l

= 4.5 = 4.5 × 1000ml

= 4500ml

Exercise 9.8

1. (a)

	l		ml		
			(1)		
	3	5	2	4	5
+	6	2	1	0	7
	9	7	3	5	2

Answer: 97l 352ml

(b)

	l			ml		
	(1)			(1)		
	1	9	0	2	6	5
+		5	9	4	7	0
	2	4	9	7	3	5

Answer: 249l 735ml

(c)

	l			ml		
	(1)	(1)			(1)	
	4	9	5	0	3	4
+		6	5	0	2	8
	5	6	0	0	6	2

Answer: 560*l* 62m*l*

2. (a)

	l		ml		
				(1)	
	4	0	7	2	5
+	1	0	2	2	5
	5	0	9	5	0

Answer: 50*l* 950m*l*

(b)

	l		ml		
	(1)	(1)			
	2	3	8	6	4
+	1	8	4	3	5
	4	2	2	9	9

Answer: 42*l* 299m*l*

(c)

	l		ml		
				(1)	
	6	4	0	7	0
+	2	5	7	5	0
	8	9	8	2	0

Answer: 89*l* 820m*l*

(d)

	l		ml		
	(1)		(1)	(1)	
	0	9	0	6	5
+	1	8	4	5	6
	2	7	5	2	1

Answer: 27*l* 521m*l*

3. (a)

	l		ml		
		(9)	(13)		
	(6)	10	~~3~~	(13)	
	~~6~~	~~0~~	~~4~~	~~3~~	8
−	1	7	4	7	1
	4	2	9	6	7

Answer: 42*l* 967m*l*

(b)

	l		ml		
		(13)			
	(0)	~~3~~	(10)	(7)	(14)
	~~1~~	~~4~~	~~0~~	~~8~~	~~4~~
−	0	8	5	0	6	8
	0	5	5	2	1	6

Answer: 55*l* 216m*l*

(c)

	l		ml		
		(9)	(9)		
	(4)	~~10~~	~~10~~	(12)	
	~~5~~	~~0~~	~~0~~	~~2~~	8	0
−	1	0	0	3	6	0
	3	9	9	9	2	0

Answer: 399*l* 920m*l*

4. (a)

	l		ml		
	(8)	(10)			
	~~9~~	~~0~~	7	7	0
−	2	5	7	5	0
	6	5	0	2	0

Answer: 65*l* 20m*l*

(b)

	l		ml		
	(6)	(10)		(3)	(10)
	~~7~~	~~0~~	0	~~4~~	~~0~~
−	2	6	0	2	8
	4	4	0	1	2

Answer: 44*l* 12m*l*

(c)

	l		ml		
	7	6	4	7	0
−	4	5	1	4	0
	3	1	3	3	0

Answer: 31*l* 330m*l*

(d)

	l		ml		
	(1)	(15)			
	~~2~~	~~5~~	3	7	8
−	1	9	3	0	0
	0	6	0	7	8

Answer: 6*l* 78m*l*

5. Milk in first bucket: 45*l* 375m*l*

Milk second bucket: 44*l* 876m*l*

45*l* 375m*l* > 44*l* 876m*l*

Milk in first bucked > Milk in second bucket

Difference in quantity: Milk in first bucket - Milk in second bucket

= 45*l* 375m*l* – 44*l* 876m*l*

= 499m*l*

	l		m*l*		
			(12)	(16)	
		(4)	~~2~~	~~6~~	(15)
	4	~~5~~	~~3~~	~~7~~	~~5~~
–	4	4	8	7	6
	0	0	4	9	9

Thus, Fist bucket contains more milk than second bucket by 499m*l*.

6. Milk sold by dairy on Monday: 72*l* 850m*l*

Milk sold by dairy on Tuesday: 89*l* 760m*l*

Milk sold by dairy on Wednesday: 74*l* 90m*l*

Total sale of dairy: Milk sold on Monday + Milk sold on Tuesday + Milk sold on Wednesday

= 72*l* 850m*l* + 89*l* 760m*l* + 74*l* 90m*l*

= 236*l* 700m*l*

	l		m*l*		
	(1)	(1)	(2)		
	7	2	8	5	0
	8	9	7	6	0
+	7	4	0	9	0
2	3	6	7	0	0

Answer: Dairy sold 236*l* 700m*l* of milk in these three days.

Learning Updates

1. (a) 3455cm to m and cm

1m = 100cm

3455cm = 3400cm + 55m

$= \frac{3400}{100}$m + 55cm

= 34m + 55cm

= 34m 55cm

(b) 360*l* 5m*l* into m*l*

1*l* = 1000m*l*

306*l* 5m*l* = 360 × 1000m*l* + 5m*l*

= 360005ml

(c) 5378m to km and m

1km = $\frac{1}{1000}$km

5378m = 5000m + 378m

= $\frac{5000}{1000}$km + 378m

= 5km 378m

(d) 40kg 15g into g

1kg = 1000g

40kg 15g = 40 × 1000g + kg

= 4000g + 15g

= 40015g

(e) 44074cm to m and cm

1m = 100cm

44074 = 4400cm + 74cm

= $\frac{44000}{100}$ m + 74cm

= 440m 74cm

(f) 108mg to g and mg

1mg = $\frac{1}{1000}$g

108mg = 100mg + 8mg

= $\frac{100}{1000}$g + 8mg

= 0.1g 8mg

(g) 381228 m*l* to m*l*

1*l* = 1000m*l*

308*l* 228m*l* = 38 × 1000m*l* + 228m*l*

= 38000m*l* + 2288*l*

= 38228m*l*

(h) 3151g to kg and g

1g = $\frac{1}{1000}$kg

3151g = 3000g + 151g

= $\frac{3000}{1000}$kg + 151g

= 3kg 151g

(i) 5339ml to l and ml

$1\text{m}l = \frac{1}{1000}l$

$5339\text{ml} = 5000\text{ml} + 339\text{ml}$

$= \frac{5000}{1000}l + 339\text{m}l$

$= 5l\ 339\text{m}l$

(j) 203mm to cm and mm

$1\text{mm} = \frac{1}{10}\text{cm}$

$203\text{mm} = 200\text{mm} + 3\text{mm}$

$= \frac{200}{10}\text{cm} + 3\text{mm}$

$= 20\text{cm}\ 3\text{mm}$

(k) 13g 40mg to mg

$1\text{g} = 1000\text{mg}$

$13\text{g}\ 40\text{mg} = 13 \times 1000\text{mg} + 40\text{mg}$

$= 13000\text{mg} + 40\text{mg}$

$= 13040\text{mg}$

(l) 30kg 209g to g

$1\text{kg} = 1000\text{g}$

$30\text{kg}\ 209\text{g} = 30 \times 1000\text{g} + 209\text{g}$

$= 3000\text{g} + 209\text{g}$

$= 30209\text{g}$

2. (a)

kg			g		
(1)				(1)	
8	0	5		2	6
	9	2	1	3	8
	1	2	0	0	4
9	0	9	1	6	8

Answer: 909kg 168g

(b)

m		cm			mm	
(2)					(1)	
	5	5	0	3	2	0	2
	1	8	0	6	2	0	4
+	4	8	0	0	0	0	9
1	2	1	0	9	4	1	5

Answer: 121m 94cm 15mm

(c) $1\text{mg} = \frac{1}{1000}\text{g}$

$3960\text{mg} = 3000\text{g} + 960\text{ mg}$

$= \frac{3000}{1000}\text{g} + 960\text{mg}$

$= 3\text{g}\ 960\text{ml}$

kg		g			mg		
		(1)	(1)		(1)		
	0	4	4	9	0	6	9
	0	0	0	3	9	6	0
+	6		0	0	0	0	0
	6	4	5	3	0	2	9

Answer: 6kg 453g 29mg

(d)

l		m*l*		
(1)		(1)	(1)	
1	6	2	6	3
2	6	0	2	7
+ 1	0	2	4	8
5	2	5	3	8

Answer: 52*l* 538m*l*

(e)

km		m		
(1)		(1)	(1)	
1	3	3	3	7
0	5	2	5	0
+ 0	2	0	3	6
2	0	6	2	3

Answer: 20km 623m

(f) $1\text{m}l = \frac{1}{1000}l$

$1008 = 1000\text{m}l + 8\text{m}l$

$= \frac{1000}{1000}l + 8\text{m}l$

$= 1l\ 8\text{m}l$

l		m*l*		
		(1)		
1	8	6	0	3
+	1	0	0	8
1	9	6	1	1

Answer: 19*l* 611m*l*

3. (a)

kg		g		
	(9)	(9)	(9)	
(1)	~~10~~	~~10~~	~~10~~	(10)
~~2~~	~~0~~	~~0~~	~~0~~	~~0~~
– 1	1	2	0	9
0	8	7	9	1

Answer: 8kg 791mg

(b)

l		ml		
	(7)	(10)	(1)	(12)
1	~~8~~	~~0~~	~~2~~	~~2~~
– 0	6	4	0	5
1	1	6	1	7

Answer: 11*l* 617m*l*

(c)

m	cm	
	(9)	
(0)	~~10~~	(10)
~~1~~	~~0~~	~~0~~
– 0	2	5
0	7	5

Answer: 75cm

(d)

l			ml		
	(9)	(9)	(9)	(9)	
(1)	~~10~~	~~10~~	10	~~10~~	(10)
~~2~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
–	5	4	0	2	3
1	4	5	9	7	7

Answer: 145*l* 977m*l*

or

l		ml		
	(9)	(9)	(9)	
(1)	~~10~~	~~10~~	~~10~~	(10)
~~2~~	~~0~~	~~0~~	~~0~~	~~0~~
–	5	4	2	3
1	4	5	7	7

Answer: 145*l* 77m*l*

(e)

kg		g			mg	
	(9)	(9)	(9)			
(1)	~~10~~	~~10~~	~~10~~	(11)		
~~2~~	0	0	0	~~1~~	9	
–	3	0	2	2	4	
1	6	9	7	9	5	

Answer: 1kg 697g 95mg

(f)

km		m			cm	
	(9)	(9)	(9)			
(3)	~~10~~	~~10~~	~~10~~	(10)		
~~4~~	~~0~~	0	0	0	0	2
– 3	4	3	1	4	0	2
0	5	6	8	6	0	0

Answer: 5km 686m

4. Sam's height = 1720mm = 172 (1cm = $\frac{1}{10}$mm)

Tom's height = 2cm + 4mm + Sam's height

= 2cm 4mm + 1720mm (172cm) (1cm = $\frac{1}{10}$mm)

= 174cm 4mm

cm			mm	
	0	2	0	4
+ 1	7	2	0	0
1	7	4	0	4

Tom height is 4cm 2mm less than Rihan, then Rihan's height should be 4cm 2mm more than Tom

Rihan's height: 4cm + 2mm + Tom's height

= 4 cm 2mm + 174cm 4mm

= 178cm 6mm

cm			mm	
1	7	4	0	4
+		4	0	2
1	7	8	0	6

Sam's height < Tom's height < Rihan's height

172cm < 174cm 4mm < 178cm 6mm

5. Sales of first shop: 48*l* 756m*l*

Sales of nieghbouring shop: 6435ml less than sales of first shop

= 48*l* 756m*l* – 6435m*l* (6*l* 435m*l*)

$1 \text{m}l = \frac{1}{1000} l$

$6435 \text{m}l = 6000 \text{m}l + 435 \text{m}l$

$6435 \text{ml} = \frac{6000}{1000} l + 435 \text{ml}$

$6435 \text{m}l = 6l\ 435 \text{m}l$

	l		m*l*		
	4	8	7	5	6
–	0	6	4	3	5
	4	2	3	2	1

Answer: Sales of neigbouring shop is 42*l* 321m*l*

6. Total Quantity of granny's wheat: 345kg 234g

Quantity of wheat distributed by the goverment: 199kg 564g

Total Quantity of wheat left: Total Wheat – Wheat Distributed

	kg			g		
		(13)	(14)	(11)		
	(2)	~~3~~	~~4~~	~~1~~	(13)	
	~~3~~	~~4~~	~~5~~	~~2~~	~~3~~	4
–	1	9	9	5	6	4
	1	4	5	6	7	0

= 345kg 234g – 199kg 564g

= 145kg 670g

Answer: 145kg 670g wheat is left.

Multiple Choice Question

1. 1m = 1000mm

4m = 4 × 1000mm

= 4000mm

Answer: (a) 4000mm

2. $1 \text{m}l = \frac{1}{1000} l$

$3000 \text{m}l = \frac{3000}{1000} l$

$= 3l$

Answer: (c) 3*l*

3. 1gram = 1000mg

Answer: (d) 1000

4. 3.5cm × 4m = 14cm

1m = 100cm

4m = 4 × 100cm

= 400

= 1400cm

			(2)		
			3	.	5
×		4	0		0
	1	4	0	0	. 0

Answer: (a) 1400cm

5. $\frac{1}{10} l = 2l$

$1l = 1000 \text{m}l$

$2l = 2 \times 1000\text{ml} = 2000 \text{m}l$

Answer: (a) 2000

6. 1kg 500g = 1 × 1000g + 500g

=1000g + 500g = 1500g

$= \frac{1500}{3} = 500\text{g}$

Answer: (d) 500g

7. Length of new pencil: 20cm

Length of pencil after getting used: 6cm 4mm

Length of pencil used: Length of new pencil – Length of pencil after getting used

	cm		mm
		(9)	
	(1)	~~1~~0	(10)
	~~2~~	~~0~~	~~1~~0
–	0	6	5
	1	3	6

= 20cm – 6cm 4mm

= 13.6cm

= 13cm 6mm

Answer: (b) 13cm 6mm

Skills Check

Weight of box with Oranges: 270kg 700g

Weight of box with Apples: 246kg

Weight of box with Pears: 192kg 500g

Total Weight of fruit = 690kg

Weight of box alone: Total box of fruits (Weight of box with Oranges + Weight of box with Apples + Weight of box with Pears - Total weight of fruits (As weight of box has been added three times)

$$= \frac{270.\ 700 + 246 + 192.\ 500 - 690}{3}$$

$$= \frac{19.\ 200}{3} = 6.400$$

	kg			g		
	(2)		(1)			
	2	7	0	7	0	0
	2	4	6	0	0	0
+	1	9	2	5	0	0
	7	0	9	2	0	0

	kg			g		
	7	0	9	2	0	0
–	6	1	0	0	0	0
		1	9	2	0	0

Answer: Weight of box alone is 6kg 400g.

10 Area and Perimeter

1. (a)  (b)  (c) 

2. (a) Area = Number of squares covered = 14

(b) Area = Number of squares covered = 10

(c) Area = Number of squares covered = 19

(d) Area = Number of squares covered = 14

(e) Area = Number of squares covered = 13

(f) Area = Number of squares covered = 12

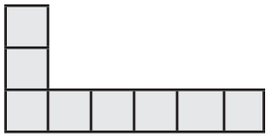
3. (a) Number of squares covered 10

(b) Number of squares covered 13

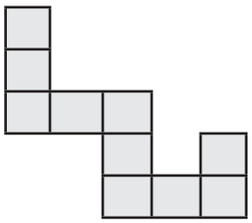
(c) Number of squares covered 10

4. (a)

(b)



(c)



Exercise 10.2

1. (a) Total number of complete squares = 5sq.cm

Total number of half square = 4sq.cm

Total number of more than half square = 2 sq.cm

Area of the given shape = $5 \times 1 + 4 \times \frac{1}{2} + 2$

= 5 + 2 + 2 = 9sq.cm

(b) Total number of complete squares = 6sq.cn

Total number of half squares = 4sq.cm

Are of the given shape = $6 + 4 \times \frac{1}{2}$

= 6 + 2

= 8sq.cm

(c) Total number of half squre = 6sq.cm

Area of the given shape = $\frac{1}{2} \times 6$

= 3sq.cm

(d) Total number of complete squares: 5

Total number of half squares: 4

Area of the given shape = $5 + 4 \times \frac{1}{2}$

= 5 + 2

= 7sq.cm

Exercise 10.3

1. (a) Perimeter = Sum of the length of all the sides

= 2.5 + 2.5 + 3cm

= 8cm

(b) Perimeter = Sum of the length of all the sides

2.4cm + 3.3cm + 2.4cm + 3.3cm

= 11.4cm

(c) Perimeter = Sum of the length of all the sides

= 2.5cm + 2.5cm + 2.5cm + 2.5cm

= 10cm

2. (a) Perimeter = Sum of the length of all the sides

= 28cm

(b) Perimeter = Sum of the length of all the sides

= 28cm

(c) Perimeter = Sum of the length of all the sides

= 25cm

3. (a) Perimeter = Sum of the length of all the sides

4cm + 4cm + 8cm

= 16cm

(b) Perimeter = Sum of the length of all the sides

5cm + 5cm + 5cm + 5cm

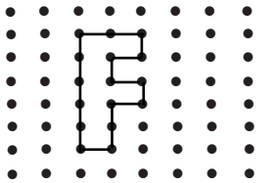
= 20cm

(c) Perimeter = Sum of the length of all the sides

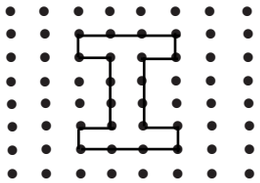
5cm + 2cm + 2cm + 5cm

= 14cm

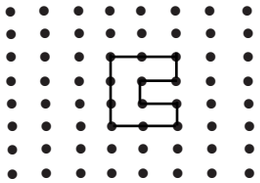
4. (a) 18 units



(b) 20 units



(c) 12 units



5. (a) Perimeter of rectangle = Sum of length of all the sides

Length = 6cm

Breadth = 2cm

= 6 + 2 + 6 + 3 (As rectangle opposite sides are equal)

= 16cm

(b) Perimter of square = Sum of all the sides (Side = 5cm)

5 + 5 + 5 + 5 (All sides of square are equal)

= 20cm

(c) Perimeter of hexagonal = Sum of all the sides (Side = 8cm)

= 8cm + 8cm + 8cm + 8cm + 8cm + 8cm (A hexagonal has 6 sides)

= 48cm

(d) Perimeter of pentagon = Sum of all the sides (Side = 3cm)

= 3cm + 3cm + 3cm + 3cm + 3cm (A pentagon has 5 sides)

= 15cm

6. Length of 1 side of square handkerchief = 10cm

Perimeter of square handkerchief = 10cm + 10cm + 10cm + 10cm (All sides of square are equal)

= 40cm

Length of golden string need to put around square handkercheif = Perimeter of square handkerchief

Length of golden string need to put around square handkercheif = 40cm

Answer: Amit needs to buy golden string of length 40cm to put around the square handkerchief.

7. Length of rectangular ground: 10m

Breath of rectangula ground: 8m

Perimeter of rectangular ground: Sum of length of all the sides

= 10m + 8m + 10m + 8m (A rectangle has opposite sides equal)

= 36m

Length of fence needed = Perimeter of rectangular ground

Length of fence needed = 36m

Answer: Sonal needs fence of length 36m to put around his rectnagular ground.

8. Perimeter of triangular ground = Sum of length of all the sies

= 18m + 15m + 15m

= 48m

Length of fence required for the park = Perimeter of triangular ground

Length of fence required for the park = 48m

Answer: The owner required fence of length 48m for the park.

Exercise 10.4

1. To be done by students

2. To be done by students

Learning Updates

1. (a) Perimeter = Sum of the length of all the sides

= 5cm + 5cm + 5cm

= 15cm

(b) Perimeter = Sum of the length of all the sides

= 20cm + 29cm + 20cm + 47cm

= 116cm

(c) Perimeter = Sum of the length of all the sides

= 3cm + 10cm + 3cm + 10cm

= 26cm

(d) Perimeter = Sum of the length of all the sides

= 5cm + 5cm + 5cm + 5cm

= 20cm

(e) Perimeter = Sum of the length of all the sides

= 8cm + 8cm + 7cm

= 23cm

(f) Perimeter = Sum of the length of all the sides

= 9cm + 6cm + 4cm + 7cm

= 26cm

(g) Perimeter = Sum of the length of all the sides

= 4cm + 8cm + 6cm

= 18cm

(h) Perimeter = Sum of the length of all the sides

= 3cm + 3cm + 3cm + 3cm

= 12cm

(i) Perimeter = Sum of the length of all the sides

= 4cm + 3cm + 7cm + 8cm

= 22cm

2. (a) Area of shape = Total number of square

Perimeter of shape = Sum of the lengths of its sides

A = 14sq.units

P = 18sq.units

(b) Area of shape = Total number of square

Perimeter of shape = Sum of the lengths of its sides

A = 12sq.units

P = 14sq.units

(c) Area of shape = Total number of square

Perimeter of shape = Sum of the lengths of its sides

A = 9 sq.units

P = 14sq.units

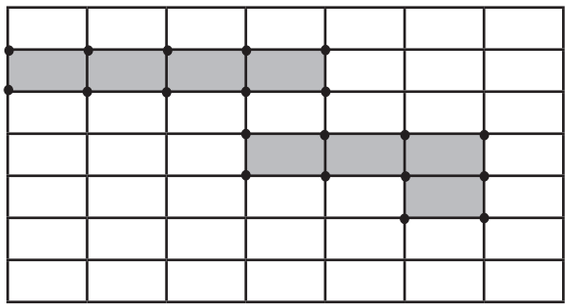
(d) Area of shape = Total number of square

Perimeter of shape = Sum of the lengths of its sides

A = 10 sq.units

P = 14sq.units

3.



4. Area of shapes = full or more than half square covered by them.

(a) 11 units

(b) 7 units

(c) 6 units

(d) 11 units

(e) 9 units

5. (a) Area of shape = Total number of square
= 7sq.units

(b) Area of shape = Total number of square
= 13sq.unit

(c) Area of shape = Total number of square
= 10sq.unit

Multiple Choice Question

1. Perimeter of shape = Sum of the lengths of its sides
= 3cm + 4cm + 2cm + 2cm + 5cm
= 16cm
Answer: (c) 16cm

2. Length of the rectangle = 10cm
Breath of the rectangle = 3cm
Perimeter of the rectangle = 10cm + 3cm + 10cm + 3cm
(opposite sides of rectangle = 26cm)
Answer: (a) 26cm

3. Length of the fence of a rectangular park = 125m
Breath of the fence = 73m
Perimter of the fence = Sum of the lengths of its sides
= 125m + 73m + 125m + 73m (opposite sides of a rectangle are equal)
Length of the fence of rectangulr park = 396m
Answer: (c) 396m

4. Side of square = 6cm
Sum of the lengths of its sides
= 6cm + 6cm + 6cm + 6cm (All sides of square are equal)
= 24cm
Answer: (b) 24cm

Skills Check

1. Perimeter of square sheet = 24cm
Side of square sheet = $\frac{\text{Perimeter}}{1000}$ (A square has 4 equal sides)
$= \frac{24}{4} = 6\text{cm}$
If the square sheet is cut into 2 equal rectangles then, the length of rectangle = 3cm (Side of square $\frac{1}{2} = 6 \times \frac{1}{2} = 3\text{cm}$) and breadth will remain the same
Perimeter of shape = Sum of the lengths of its sides
= 3cm + 6cm + 3cm + 6cm (opposite sides of a rectangle are equal)
= 18cm

2. Perimeter of rectangle = Length + breath + Length + Breath
42cm = 2(length + breadth) (opposite side of a rectangle are equal).
42cm = 2 (length + 5)
$\frac{42}{2}$cm = length + 5
= 21cm = length + 5cm
length = 21 – 5
length = 16cm

3. Side of square = 3cm
Unfolding it one time: Length will become 6cm breadth will remain the same
Unfolding it second time : Length will be remain 6cm breadth will become 6cm
Unfolding it third time: Length will become 12cm breadth will remain the same
Length of the piece of paper = 12
Breadth of the piece of paper = 6
Area of given shape = Area of rectangle
= 12 × 6cm
= 72cm.sq

11 Time

Get Started

To be done by students

Exercise 11.1

1. (a)  9:00

(b)  11:47

(c)  5:24

(d)  7:39

(e)  10:00

(f)  6:42

2. (a) 3:44

44 minutes past 3.

16 minutes to 4.

(b) 9:10

10 minutes past 9.

50 minutes to 10.

(c) 7:18

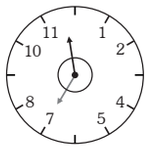
18 minutes past 7.

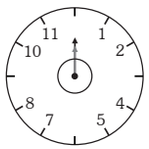
42 minutes to 8.

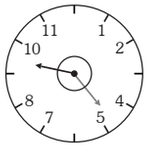
(d) 11:49

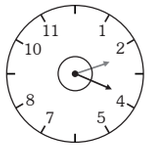
49 minutes past 11.

40 minutes to 12.

3. (a)  = **6:57**

(b)  = **12:00**

(c)  = **4:42**

(d)  = **2:18**

Exercise 11.2

1. (a) 03:15 hours (b) 15:50 hours
(c) 18:30 hours (d) 10:00 hours
(e) 0:00 hours (f) 18:20 hours

2. (a) 3:20pm (b) 5:57pm
(c) 8:18pm (d) 4:20am
(e) 8:00pm (f) 8:12pm

3. (a) 5:45pm (b) 12:30pm
(c) 06:35am (d) 10:25am
(e) 8:15pm

Exercise 11.3

1. (a) am (b) am
(c) pm (d) pm
(e) pm (f) pm

2. (a) 5:40am (b) 1:00pm
(c) 00:30am (d) 11:15pm
(e) 3:05pm (f) 1:10am

3. (a) am (b) pm
(c) pm (d) pm
(e) am (f) pm
(g) pm (h) am

4. (a) 9:40, 10:40, 11:40, 12:40, (Increase of 1 hour)

(b) 6:10am, 12:10pm, 6:10pm, 12:10am (Increase of 6 hours)

5. (a) 3:05pm + 1:00 hour = 4:05pm

(b) 4:20am + 1:00 hour = 5:20am

(c) 5:00pm + 1:00 hour = 6:00pm

(d) 10:00pm + 1:00 hour = 11:00pm

(e) 8:30am + 1:00 hour = 9:30am

(f) 5:40pm + 1:00 hour = 6:40pm

Exercise 11.4

1. (a) 3 Quarter past 3 = 3:15, Time passed from 3'o to quarted past 3 is 15 minutes

(b) Quarter to 6 is 5:45

Time from 4:30 to 5:30 = 1 hour or 60 minutes

Time from 5:30 to 5:45 = 15 minutes

Time from 4:30 to 5:45 = 60 minutes + 15 minutes = 75 minutes 1 hour 15minutes

(c) Time from 3:20 to 4:20 = 1hour 60minutes

Times from 4:20 to 4:50 = 30 minutes

Times 3:20 to 4:50 = 1hour + 30 minutes

= 1hour 30minutes

(d) Quarter to 6 = 5:45, half passed 7 = 7:30

Time from 5:45 to 6:45 = 60 minutes or 1 hour

Time from 6:45 to 7:15 = 30 minutes

Time from 7:15 to 7:30 = 15 minutes

Time from 5:45 to 7:30 = 60 minutes + 30 minutes + 15 minutes

= 105 minutes (∴ 1hour = 60 minutes)

= 1hour 45minutes

2. (a) 9:25am = 9 hours 25minutes

9:25am + 55min = 9hours 25minutes + 55 minutes

= 9hours + 80minutes

= 10 hours 20 minutes (1 hour = 60 minutes)

= 10:20am

(b) 12:18pm = 12hours + 18minutes

12:18pm + 1hour 10minutes = 12hours + 18minutes + 1hour + 10 minutes

=13hour 28minutes

= 1:28pm

(c) 7:45am = 7hours + 45 minutes

7:45am + 2hour 32minutes = 7hour + 45minutes + 2hours + 32minutes

= 9hours + 77minutes = 10hours + 17minutes (1hour = 60minutes)

=10:17am

(d) 9:09pm = 21hours + 9minutes

9:09 + 3hours 25minutes = 21 hours + 9minutes + 3hours + 25minutes

= 24hours 34minutes

= 00:34am

(e) 10: 55pm = 22hours + 55minutes

10:55 + 1hour + 21minutes = 22hours + 55minutes + 1hours + 21minutes

= 23hours 76minutes or 24 hours 16 minutes

[1hour = 60minutes] = 00:16am

3. (a) Time from 7:20 to 8:20 = 1hour or 60minutes

Time from 8:20 to 9:00 = 40minutes

Time from 9:00 to 9:05 = 5 minutes

Times from 7:20 to 9:05 = 1hour + 40minutes + 5minutes

= 1hour 45minutes

Answer: The aeroplane took 1 hour 45minutes to reach Delhi from Mumbai.

(b) Time from 9:15 to 11:15 = 2 hours or 120 minutes

(1 hour = 60 minutes

2 hours = 2 × 60 minutes

= 120 minutes)

Time from 11:15 to 12:00 = 45minutes

Time from 12:00 to 12:05 = 5minutes

Time from 9:15 to 12:05 = 2hours +

45minutes + 5minutes

= 2hours 50 minutes

Answer: The cricket match lasted for 2 hour 50 minutes.

(c) Time from 7: 30 to 12:30 = 5 hours

Time from 12:30 to 3:30 = 3hours

Time from 7:30 to 3:30 = 5 hours + 3hours

= 8 hours

Answer: The bus took 8hours to reach kanpur from Delhi.

(d) Time from 1:30 to 3:30 = 2 hours

Time from 3:30 to 4:00 = 30 minutes

Time from 4:00 to 4:15 = 15 minutes

Time from 1:30 to 4:15 = 2 hours + 30 minutes + 15 minutes

= 2 hours 45 minutes

Answer: The dance show lasted for 2 hours 45 minutes.

(e) 2:30 pm = 14 hours + 30 minutes

2:30 pm + 2hours 50minutes = 14hours + 30minutes + 2hours + 50 minutes

= 16hours 80 minutes

= 17 hours 20 minutes = 5:20pm

Answer: Akshara finished her file at 5:20pm

(f) 2: 15pm = 14hours 15minutes

2:15pm + 1 hour 45 minutes = 14hours 15minutes + 1 hour 45 minutes

= 15 hours 60 minutes

= 15 hours 60 minutes = 4:00pm

Alex finished playing football at 4:00pm

Exercise 11.5

1. (a) 2nd May (b) 19th february

(c) 29th june (d) 26th May

(e) Thursday, 15th December

(f) 8th june, Thursday

2. (a) june (b) 366days

(c) 31days (d) 7

3. 2004, 2020 are leap year as they are divisible by 4, but not by 100 whereas 2000 is a leap year as it is divisble by 4, 100 and also by 400.

1985, 1994, 1954, 2010, 2018, 2006 are not leap year they are not divisible by 4.

1900 is not leap year as they are divisible by 100 and 4 but not by 400.

4. (a) April June and August have 30 days, while May and July have 31 days.

6th April to 31st April = 25days

1 May to 30 may = 30 days

1 June to 30 June = 30 days

1 July to 31 July = 31 days

1 August to 10 August = 10 days

Days between 1 April and 10 10 August = 25 days + 30 days + 30 days + 31 days + 10 days

= 126 days

Answer: 126 days separate Shreys's and Shrti's birthdays.

(b) 2012 is divisible by 4 and not by 100 hence, it is a leap year

Days in February 2012 = 29

Day in march = 31

Day in June = 30

26 February to 29th february = 3days

1 March to 31 March = 31days

1 April to 30 April = 30 days

1 May to 31 May = 31 days

1June to 30 June = 30days

1 July to 28 July = 28 days

26th february to 28 July = 3days + 31 days + 30 days + 31 days + 30 days + 28 days

= 153 days

Answer: There are 153 days between 26 february and 28 July.

(c) Days in February = 28

23 February to 28 February = 5days

1 March to 19 March = 19 days

23 February to 19 March = 5days + 19 days

= 24 days (Including the last date)

Answer: There are 24 days between 23 february and 19 March.

Exercise 11.6

1. (a) 1 day = 24 hours

6 days into hours

6 days = 6 × 24 hours

= 144 hours

(b) 1 day = 24 hours

5days into hours

5days = 5 × 24 hours

120 hours

(c) 8days 9 hours into hours

1 day = 24 hours

8 days 9 hours = 8 × 24 hours + 9hours

= 192 hours + 9 hours

= 201 hours

(d) 4 days into hours

4 days = 4 × 24 hours

= 96 hours

2. (a) 1 hour = 60 minutes

5 hours = 5 × 60 minutes

= 300 minutes

(b) 7 hour 20 minutes into minutes

1 hours = 60 minutes

7 hours 20 min = 7 × 60 minutes + 20min

= 420 min + 20 min

= 440 minutes

(c) 4 hours into minutes

1 hour = 60 minutes

4 hours = 4 × 60 minutes

= 240 minutes

(d) 9 hours 6min into minutes

1 hour = 60 minutes

= 9 × 60 minutes + 6 minutes

= 540 minutes + 6 minutes

= 546 minutes

(e) 5h 24min into minutes

1 hour = 60 minutes

5h 24min = 5 × 60 minutes + 24 minutes

= 300 minutes + 24 minutes

= 324 minutes

(f) 15h 27min

1 hour = 60 minutes

15h 27min = 15 × 60 minutes + 27 minutes

= 900 min + 27min

= 927 minutes

3. (a) 15 minutes into seconds

1 minute = 60 seconds

15 minutes = 15 × 60 seconds

= 900 seconds

(b) 18min into seconds

1 minute = 60 seconds

18min = 18 × 60 seconds

= 1080 seconds

(c) 2 min 18 seconds into seconds

1 minute = 60 seconds

2min 18 secibds = 2 × 60 seconds + 18 seconds

= 120 seconds + 18 seconds

= 138 seconds

(d) 25 minutes 24 seconds into seconds

1 minute = 60 seconds

25 minutes 24 seconds = 25 × 60 seconds + 24 seconds

= 1500 seconds + 24 seconds

= 1524 seconds

(e) 7min 40 seconds

1 minutes = 60 seconds

7 min 40 seconds = 7 × 60 seconds + 40 seconds

= 420 seconds + 40 seconds

= 460 seconds

(f) 58 min 12 seconds into seconds

1 minutes = 60 seconds

58min 12 seconds = 58 × 60 seconds + 12 second

3480 seconds + 12 seconds

= 3492 second

Exercise 11.7

1. (a)

	min		sec	
	(1)		(1)	
	3	5	1	7
+	1	8	3	8
	5	3	5	5

Answer: 53min 55seconds

(b)

	min		sec	
	0	5	1	8
+	2	4	2	0
	2	9	3	8

Answer: 29 min 38seconds

(c)

	h		min		sec	
	(1)		(1)			
	1	6	1	6	1	0
+	2	5	3	5	2	0
	4	1	5	1	3	0

Answer: 41 hours 51 min 30 sec

(d)

	h			min		sec	
				(1)			
	0	0	5	4	5	5	6
+	1	0	0	1	9	1	2
	1	0	5	6	4	6	8

105 hours 64min 68seconds

= 105 hours 65min 18 seconds (1min = 60seconds)

=106hours 5min 8 seconds

Answer: 106hours 5min 8 seconds (1hour = 60 minutes)

2. (a)

	h		min	
		(4)	(6)	
	2	~~5~~	~~0~~	9
–	1	0	2	4
	1	4	4	5

[1 hour = 60 minutes]

Answer: 14h 85min

(b)

	h		min		sec	
			(9)	(9)		
	(0)	(11)	~~3~~	~~9~~	(7)	(0)
	~~1~~	~~2~~	~~4~~	~~0~~	~~1~~	~~0~~
–	0	4	5	6	1	6
	0	7	4	3	5	4

1 hours = 60 minutes

1 minute = 60 seconds

Answer: 7h 43min 54sec

3. Time taken by Aarav to travel from one side: 15hours 20min

Time taken by Aarav to travel further to reach zoo: 13hours 54min

Total time he travelled: 15hours 20min + 13hours + 54min

	h		min	
	1	5	2	0
+	1	3	5	4
	2	8	7	4

= 28hours 74min

= 29hours 14min

Answer: Aarav travelled for 24hours 14minutes.

4. Time taken by Anshika's mother to make Idli: 32min 12sec

Time taken by Anshika's mother to make Sambhar: 53min 28sec

Total taken by Anshika's mother to prepare her

lunch: 32min 12sec + 53min 28sec

	min		sec	
			(1)	
	3	2	1	2
+	5	3	2	8
	8	5	4	0

= 85min 40sec

= 1hour 25min 40sec

(∴ 1hour = 60min)

Answer: Anshika's mother took: 85min 25min 40sec to prepare lunch for her.

5. Total time Pulkit took to complete his homework: 55min 14seconds

Total time Sam took to complete his homework: 1hour 10min 20Second

1hour 10min 20seconds = 60min + 10min + 20sec

(1hour = 60minutes)

= 55min 14sec < 1hour 10min 20seconds

= 70min 20sec

	h		min	
	(6)	(10)	(1)	(10)
	~~7~~	~~0~~	~~2~~	~~0~~
–	5	5	1	4
	1	5	0	6

Answer: Sam took 15min 06sec more than Pulkit to complete his homework.

Learning Updates

1. (a) am (b) pm

(c) am (d) pm

2. (a) 7days into hours

1days = 24hours

7days = 7 × 24

= 168 hours

(b) 6days into hours

1days = 24hours

6days = 6 × 24

= 144 hours

(c) 10days into hours

1days = 24hours

10days = 10 × 24

= 240 hours.

(d) 14days into hours

1days = 24 hours

14days = 14 × 24

= 336 hours

(e) 4days 20 hours into hours

1days = 24 hours

4days 20 hours = 4 × 24 hours + 20 hours

= 96hours + 20 hours

= 116 hours

(f) 2 days 12 hours into hours

1days = 24hours

2 days 12 hours = 2 × 24 hours + 12 hours

= 48 hours + 12 hours

= 60 hours

3. (a) 10hours into minutes

1hours = 60minutes

10hours = 10 × 60minutes

= 600minutes

(b) 36 hours into minutes

1 hours = 60 minutes

36 hours = 36 × 60 minutes

= 2160 minutes

(c) 360hours into minutes

1 hours = 60 minutes

30 hours = 30 × 60 minutes

= 1800 minutes

(d) 13 hours 25 minutes into minutes

1 hour = 60 minutes

13hours 25minutes = 13 × 60 minutes + 25 minutes

= 780 minutes + 25 minutes

= 805 minutes

(e) 11 hours 10 minutes into minutes

1 hour = 60 minutes

11 hours 10 minutes = 11 × 60 minutes + 10 minutes

= 660 minutes + 10 minutes

= 670 minutes

(f) 12 hours 30 minutes into minutes

1 hour = 60 minutes

12 hours 30 minutes = 12 × 60 minutes + 30 minutes

= 720 minutes + 30 minutes

= 750 minutes

4. (a) 12 minutes into seconds

1min = 60 seconds

12 minutes = 12 × 60 seconds

= 720 seconds

(b) 15 minutes into seconds

1min = 60 seconds

15 minutes = 15 × 60 seconds

= 900 seconds

(c) 25 minutes into seconds

1min = 60 seconds

25 minutes = 25 × 60 seconds

= 1500 seconds

(d) 7 minutes 45 seconds into seconds

1min = 60 seconds

7 minutes 45 seconds = 7 × 60 seconds + 45 seconds

= 420 seconds + 45 seconds

= 465 seconds

(e) 12 minutes 45 seconds into seconds

1min = 60 seconds

12 minutes 45 seconds = 12 × 60 seconds + 45 seconds

= 720 seconds + 45 seconds

= 765 seconds

(f) 8 hours into seconds

1 hours = 60 minutes

8 hour = 8 × 60 minutes

= 480 minutes

480 minutes = 480 × 60 sec

= 28800 seconds

5. (a) 6:10pm (b) 19:15hours

(c) 9:20am (d) 12:00am

(e) 12:00pm (f) 16:00hours

6. (a) 4:15pm = 16 hours + 15 minutes

4:15pm + 3h 15minutes = 16 hours + 15 minutes + 3 hours + 15 minutes

= 19 hours 30minutes

= 7:30pm

Answer: Alex returned at 7:30pm

(b) Time Harsha took to cook her breakfat: 25minutes

Time Harsha took to cook her luch: 28 minutes

Time Harsha took to cook her dinner: 24 minutes

Total time Harsha spent on cooking: 25min + 28 min + 24min

= 77minutes

= 60 minutes + 17 minutes

= 1 hour 17 minutes [1 hour = 60 minutes]

= 1 hour 17 minutes

Answer: Harsha spent 1 hour 17 minutes in cooking.

(c) Time for which Naira went to play = 2:50pm

= 1450 hours

Time ofr which Naira will come back = 14 hours 50 minutes + 1 hours

= 15 hours 70 minutes

= 15 hours + 60 minutes + 10 minutes

	h		min	
	1	4	5	0
+		1	2	0
	1	3	7	0

= 16 hours + 10 minutes (1 hour = 60 minutes)

= 1610 hours

= 4:10pm

Hence, Naira will came back at 4:10pm.

(d) Total days in July: 31days

Days between 17July and 31 July = 14days

Days between 1 August and 12 August = 12days

Days between 17 July and 12 August = 14days + 12 days

= 26 days

Answer: John's family spent 26 days on their trip.

Multiple Choice Questions

1. 8 hours 40 minutes into minutes

1 hours = 60 minutes

8 hours 40 min = 8 × 60 minutes + 40 minutes

= 480 minutes + 40 minutes

= 520 minutes

Answer: (b) 520

2. 1hour = 60 minutes

Answer: (a) 60

3. 1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

1day = 24 × 60 × 60 Seconds

Answer: (d) 24 × 60 × 60

4. **Answer:** (a) hour

5. 7days 7hours into hours

1 day = 24 hours

7days 7 hours = 7 × 24 hours + 7 hours

= 168 hour + 7 hours

= 175 hours

Answer: (c) 175

6. 12 noon = 12:00 hours

12 = 2 hours 30 min

= 9:10 (1hour = 60 minutes)

12:00 = 11: 60

	h		min	
	1	1	6	0
+		2	3	0
	0	9	3	0

Answer: (c) 9:30

Skills Check

	A	B
Total time	1h + 35min + 10sec + 2h 14 min + 2 sec = 3h 49 min 30 sec	1h 40min 19sec + 2h 15min 25sec = 3h 55min 44sec
Rank	**I**	**II**

h		min		sec	
	1	3	5	1	0
+	2	1	4	2	0
	3	4	9	3	0

h		min		sec	
				(1)	
	1	4	0	1	9
+	2	1	5	2	5
	3	5	5	4	4

3hour 49minutes 30seconds < 3hour 55minutes 44seconds.

Hence, Team A was faster than team B and Ranked a I

12 Money

Exercise 12.1

1. (a)

	₹			P	
	(1)	(1)	(2)	(1)	
	9	4	6	5	0
	1	2	9	6	5
+	2	3	1	9	8
1	3	0	8	1	3

Answer: ₹1308.13

(b)

	₹			P	
	(1)	(1)	(1)	(1)	
	4	3	3	5	0
	2	5	5	5	6
+	2	3	3	2	4
	9	2	2	3	0

Answer: ₹922.30

(c)

	₹				P	
			(1)		(1)	
	2	0	3	5	7	5
	6	0	3	2	1	5
+		3	2	3	0	0
	8	3	9	0	9	0

Answer: ₹8390.90

(d)

	₹				P	
	(1)	(1)	(1)	(1)		
	2	4	4	6	5	0
	6	6	6	4	0	0
+	1	1	1	1	5	0
1	0	2	2	2	0	0

Answer: ₹10222.00

(e)

	₹				P	
	(2)	(2)	(2)	(2)	(1)	
	6	5	6	7	7	3
	8	8	7	6	6	3
+	5	6	5	6	8	6
2	1	1	0	1	2	2

Answer: ₹21101.22

(f)

	₹				P	
	(2)	(2)	(1)	(2)		
	5	6	7	6	4	0
	8	9	6	5	8	0
+	6	5	6	0	8	0
2	1	2	0	3	0	0

Answer: ₹21203.00

2. (a)

	₹				P	
	(1)	(1)	(1)	(2)	(2)	
	3	9	7	3	6	5
		5	2	3	4	5
				6	5	4
+				0	5	6
	4	5	0	4	2	0

Answer: ₹4504.20

(b)

	₹				P	
	(1)	(1)		(1)	(1)	
	3	5	4	2	9	0
	4	0	5	3	8	3
		4	6	2	0	6
+				0	0	9
	8	0	5	8	8	8

Answer: ₹8058.88

3. (a)

	₹			P	
		(13)	(14)	(11)	
	(7)	~~3~~	~~4~~	~~1~~	(10)
	~~8~~	~~4~~	~~5~~	~~2~~	~~0~~
–	4	4	6	5	6
	3	9	8	6	4

Answer: ₹398.64

(b)

	₹			P	
				(13)	
			(5)	~~3~~	(10)
	6	5	~~6~~	~~4~~	~~0~~
–	2	5	2	7	5
	4	0	3	6	5

Answer: ₹403.65

(c)

	₹			P	
			10	9	
		4	0	~~10~~	10
	3	~~5~~	~~1~~	~~0~~	~~0~~
–	2	1	2	1	6
	1	3	8	8	4

Answer: ₹138.84

(d)

	₹				P	
				9	9	
			6	~~10~~	~~10~~	10
	9	9	~~7~~	~~0~~	~~0~~	~~0~~
–	7	9	6	0	4	8
	2	0	0	9	5	2

Answer: ₹2009.52

(e)

	₹				P	
		9	15	9	12	
	8	~~10~~	~~5~~	~~10~~	~~2~~	14
	~~9~~	~~0~~	~~6~~	~~0~~	~~3~~	~~4~~
–	8	8	7	8	7	5
	0	1	8	1	5	9

Answer: ₹181.59

(f)

	₹				P	
		15	10			
	7	~~5~~	~~0~~	10		
	~~8~~	~~6~~	~~1~~	~~0~~	0	0
–	4	7	2	8	0	0
	3	8	8	2	0	0

Answer: 3882.00

4. (a)

	₹				P	
		9	9			
	1	~~10~~	~~10~~	10		
	~~2~~	~~0~~	~~0~~	~~0~~	0	0
–		4	8	6	0	0
	1	5	1	4	0	0

Answer: ₹1514.00

(b)

	₹				P	
		9	9			
	7	~~10~~	~~10~~	12		
	1	~~8~~	~~0~~	~~0~~	~~2~~	5
–	1	2	6	7	7	5
	0	5	3	2	5	0

Answer: ₹532.50

(c)

	₹				P	
		10	10			
	7	~~9~~	~~9~~	10		
	~~8~~	~~0~~	~~0~~	~~0~~	0	0
–	3	7	4	5	0	0
	4	2	5	5	0	0

Answer: ₹4255.00

(d)

	₹				P	
			4	14		
	4	0	~~5~~	~~4~~	9	9
–	1	0	4	5	6	8
	3	0	0	9	3	1

Answer: ₹3009.31

5. Cost of pen: ₹7.40

Cost of ruler : ₹9.65

Cost of Compass scale: ₹18.60

Total cost : Cost of Pen cost of ruler + Cost of Compass Scale

	₹			P	
	2	1			
			7	4	0
			9	6	5
+	1	8		6	0
	3	5		6	5

= ₹35.65

Answer: Rahan has to pay ₹35.65 to the shopkeeper.

6. Money Shruti recieved from her mother: ₹9505

Money Shruti recieved from his father: ₹9070

₹9505 > ₹9070

Money recieved from her mother > Money recieved from her father

	₹			
		(4)	(10)	
	9	~~5~~	~~0~~	5
–	9	0	7	0
	0	4	3	5

For finding how much more money Shruit recieved from her mother than her father we have to subtract the money shruti received from her mother from the money Shruti received from her father

= ₹9505 – ₹9070

= ₹435

Answer: Shruti recieved ₹435 more from her mother than her father.

7. Cost of biscuits: ₹45.50

Cost of bread: ₹54.00

Cost of candies and to toffees: ₹15.85

Total cost: Cost of biscuits + Cost of bread + Cost of Candies and toffees

	₹		P	
	(1)	(1)		
	4	5	5	0
	5	4	0	0
+	1	5	8	5
1	1	5	3	5

= ₹45.50 + ₹54.80 + ₹15.85

= ₹115.35

Money Naira had given to shopkeeper : 200

Money Naira will get back: Money given to shopkeeper – Total cost

	₹			P	
		(9)	(9)	(9)	
	(1)	~~(10)~~	~~(10)~~	~~(10)~~	(10)
	~~2~~	~~0~~	~~0~~	~~0~~	~~0~~
–	1	1	5	3	5
	0	8	4	6	5

= 200 – 115.35

= ₹84.65

Answer: Naira will get back ₹84.65

8. Cost of top: ₹1663.75

Cost of gown: ₹1462.45

Cost of belt: ₹78.05

Total cost: Cost of top + Cost of gown + Cost of belt

	₹				P	
	(1)	(2)	(1)	(1)	(1)	
	1	6	6	3	7	5
	1	4	6	2	4	5
+			7	8	0	5
	3	2	0	4	2	5

= ₹1633.75 + ₹1462.45 + ₹78.05

= ₹3204.25

Money preeti gave to the shopkeeper: ₹4000

Money preeti will recieve back: Money given to shopkeeper – Total cost

	₹				P	
	(9)	(9)	(9)		(9)	(9)
(3)	~~(10)~~	~~(10)~~	~~(10)~~		~~(10)~~	~~(10)~~
~~4~~	~~0~~	~~0~~	~~0~~		0	0
– 3	2	0	4		2	5
0	7	9	5		7	5

= ₹4000 – ₹3204.25

= ₹795.75

Answer: Preeti will get back ₹795.75

Exercise 12.2

1. (a)

	₹			
		(3)		
		3	6	0
×				5
	1	8	0	0

Answer: ₹1800

(b)

	₹			
	9	6	. 7	6
×			1	0
	9	6	7	. 6

Answer: ₹967.6

(c)

	₹					
		(2)	(3)	(3)		
	3	1	4	6	5	
×				1	6	
(1)	(1)	(1)	(1)			
1	8	8	7	9	0	
+ 3	1	4	6	5	×	
5	0	3	4	4	0	

Answer: ₹503440

(d)

₹						
			(1)			
			(1)			
		4	0	5	. 0	0
×				2	0	3
	1	2	1	5	0	0
	0	0	0	0	0	×
+ 8	1	0	0	0	×	×
8	2	2	1	5	. 0	0

Answer: ₹82215.00

(e)

₹					
		(3)	(4)		
		6	6	5	
×			1	8	
	5	3	2	0	
+	6	6	5	×	
1	1	9	7	0	

Answer: ₹1170

(f)

₹							
		(2)	(1)		(2)	(2)	
		3	6	4	0	. 6	5
×						4	4
	(4)	(1)	(1)				
	1	4	5	6	2	6	0
+ 1	4	5	6	2	6	0	×
1	6	0	1	8	8	. 6	0

Answer: 160188.60

2. Cost of 1kg of rice: ₹35.50

Cost of 12kg of rice: 12 × ₹35.50

= ₹426.00

Answer: Cost of 12kg of rice is ₹426.00

3. Cost of a table fan: ₹1050.65

Cost of 20 such table fans: 20 × 1050.65

₹						
	(1)		(1)	(1)		
	1	0	5	0	. 6	5
×					2	0
	0	0	0	0	0	0
+ 2	1	0	1	3	0	×
2	1	0	1	3	. 0	0

= ₹21013.00

Answer: Cost of 20 Such table fans is ₹21013.00

₹				
	(1)	(1)		
	3	5	. 5	0
×			1	2
(1)	7	1	0	0
+ 3	5	5	0	×
4	2	6	. 0	0

4. Cost of 1 printer: ₹3870.00

Cost of 20 such printer: 20 × ₹3870.00

= ₹77740.00

						₹
		(1)	(1)			
	3	8	7	0	. 0	0
×					2	0
	0	0	0	0	0	0
+	7	7	4	0	0	×
	7	7	4	0	0	0

Answer: Cost of 20 such printer is ₹77400.00

5. Monthy expense of Swati : ₹40000

Number of months in a year: 12

Yearly expense of Swati: 12 × ₹40000

= 480000

					₹
4	0	0	0	0	0
×				1	2
8	0	0	0	0	0
+ 4	0	0	0	0	×
4	8	0	0	0	0

Answer: Yearly expense of Swati is ₹480000.

Exercise 12.3

1. (a)

```
    3225
2 ) 6450
  - 6
    4
  - 4
    05
  - 4
     10
   - 10
      0
```

Answer: ₹32.25

(b)

```
     7876
4 ) 315.04
  - 28
    35
  - 32
     30
   - 28
     24
   - 24
      0
```

Answer: ₹78.76

(c)

```
     8380
6 ) 50280
  - 48
    22
  - 18
    48
  - 48
     00
```

Answer: ₹83.80

(d)

```
      21132
5 ) 1056.60
  - 10
     05
   - 5
     06
   - 5
      16
   - 15
       10
       10
        0
```

Answer: ₹211.32

2. Number of pencils = 4

Cost of pencils = ₹70.80

Cost of each pencil = Cost of pencils ÷ Number of pencils

= ₹70.80 ÷ 4

= ₹17.70

Answer: Cost of each pencil is ₹17.70

```
     1770
4 ) 7080
  - 4
    30
  - 28
    28
  - 28
     00
```

3. Number of notebooks: 6

Cost of notebooks: ₹48.60

Cost of each notebook: Cost of notebooks ÷ Number of notebooks

= ₹48.60 ÷ 6

= ₹8.10

$$\begin{array}{r} 810 \\ 6\overline{)4860} \\ -48\downarrow \\ \hline 6 \\ -6\downarrow \\ \hline 00 \end{array}$$

Answer: Cost of each notebook is ₹8.10

4. Total weight of tomatoes: 10

Cost of tomatoes: ₹103.50

Cost of 1kg of tomatoes: Cost of tomatoes ÷ Weight of tomatoes

= ₹103.50 ÷ 10

= ₹10.350

Answer: Cost of 1kg of tomatos is ₹10.350

5. Total expenditure: ₹614.00

Number of sisters: 2

Share of each sister: Total expenditive ÷ Number of sisters

= ₹614.00 ÷ 2

= ₹307.00

$$\begin{array}{r} 307 \\ 2\overline{)614} \\ -6\downarrow\downarrow \\ \hline 014 \\ -14 \\ \hline 0 \end{array}$$

Answer: Share of each sister is ₹307.00

6. Total pocket money: ₹320.25

Total number of days: 10

Pocket money of each day: Total pocket money – Total number of days

= ₹320.25 ÷ 10

= ₹ 32.025

Exercise 12.4

1.

S.No.	Items	Quantity	Rate (₹)	Amount (₹)
1.	Note books	5	55.40	332.40
2.	Rulers	8	25	**200.00**
3.	Pens	4	**30.25**	121.00
4.	Pencils	12	5.75	**69.00**
			Total	**722.40**

(2) Ruler amount = Quantity × Rate

₹		
	(4)	
	2	5
×		8
2	0	0

= 8 × ₹25 = ₹200.00

(3) Rate of pen is = Amount ÷ Quantity

= ₹121.00 ÷ 4

= ₹30.25

$$\begin{array}{r} 30.25 \\ 4\overline{)121} \\ -12\downarrow \\ \hline 10 \\ -8 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

(4) Amount of pencils = Quantity × Rate

= 12 × 5.75

= ₹69.00

Total: Amount of notebooks rubber, pens

=₹332.40 + ₹200 + ₹121 + ₹69.00

= ₹722.40

₹				
	(1)	(1)		
		5	. 6	5
×			1	2
	(1)			
	1	1	5	0
+	5	7	5	×
	6	9	. 0	0

	₹			P	
	(1)	(1)			
	3	3	2	4	0
	2	0	0	0	0
	1	2	1	0	0
+		6	9	0	0
	7	2	2	4	0

2.

Akraiti				
S.no	**Items**	**Quality**	**Rate per kg**	**Amount (Rate × Quantity)**
1.	Potatoes	1kg	**₹18.50**	₹18.50
2.	Beetroot	0.5kg	₹60.00	₹30
3.	Tomatoes	2kg	₹35	₹70
Total				**118.50**

Learning Updates

1. (a)

	₹			P	
		(1)			
	5	3		7	4
+	4	5		4	0
	9	9		1	4

(b)

	₹			P	
	(1)				
	4	8		2	3
+	3	5		7	5
	8	3		9	8

(c)

	₹			P	
		(1)			
	2	0	6	0	9
+	3	6	5	4	0
	5	7	1	0	9

(d)

	₹			P	
			(9)	(9)	
		(4)	~~10~~	~~10~~	(10)
	1	~~5~~	~~0~~	~~0~~	~~0~~
−		3	3	3	3
	1	1	6	6	7

(e)

	₹			P	
		(9)	(13)		
	(5)	~~10~~	~~3~~	(12)	
	~~6~~	~~0~~	~~4~~	~~2~~	5
−	2	7	9	9	0
	3	2	4	3	5

(f)

	₹			P	
		(9)	(13)		
	(1)	~~10~~	~~3~~	(10)	
	~~2~~	~~0~~	~~4~~	~~0~~	9	9
−		9	5	5	6	8
	1	0	8	5	3	1

(g)

₹					
	(2)	(4)	(4)		
	1	2	5	. 5	0
×					9
1	1	2	9	. 5	0

(h)

₹					
	1	1	1	. 0	
×			1	2	
	2	2	2	0	
+ 1	1	1	0	×	
1	3	3	2	. 0	

(i)

₹						
	(4)	(4)	(4)	(4)		
	3	9	9	. 9	9	
×					5	0
	0	0	0	0	0	
+ 1	9	9	9	9	5	×
1	9	9	9	9	. 5	0

(j) ₹81.5

(k)

```
      46440
   9 )4179.60
     − 36
       57
     − 54
       39
     − 36
       36
     − 36
        00
```

Answer: ₹464.40

(l)
$$
\begin{array}{r}
599.97 \\
3\overline{)1799.91} \\
-\ 15\downarrow \\
\hline
29 \\
-\ 27 \\
\hline
29 \\
-\ 27 \\
\hline
29 \\
-\ 27 \\
\hline
21 \\
-\ 21 \\
\hline
0
\end{array}
$$

Answer: ₹599.97

2. Cost of dress: ₹533.75

Cost of shoes: ₹200.30

Cost of towel : ₹105.00

Total cost of all the items: Cost of dress + Cost of shoes + Cost of towel

= ₹533.75 + ₹200.30 + ₹105.00

= ₹839.05

	₹			P	
		(1)	(1)		
	5	3	5	7	5
	2	0	0	3	0
+	1	0	5	0	0
	8	4	1	0	5

Answer: Total cost of items bought by Reena is ₹841.05

3. Cost of shoes: ₹409.99

Cost of gloves: ₹260

Cost of Football: ₹125.00

Total cost: Cost of shoes + Cost of gloves + Cost of football

	₹			P	
	(1)				
	4	0	9	9	9
	2	6	0	3	0
+	2	5	0	0	0
1	9	1	9	9	9

= ₹409.99 + ₹260 + ₹1250.52

= ₹1919.99

Money given to the shopkeepper: ₹2000

Money Amin will get back: Money given to shopkeeper – Total cost of all items

= ₹2000 – 1919.99

= ₹80.01

	₹				P	
		(9)	(9)	(9)	(9)	
	(1)	~~10~~	~~10~~	~~10~~	~~10~~	(10)
	~~2~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
–	1	9	1	9	9	9
	0	0	8	0	0	1

Answer: Amin will get back ₹80.01

4. Money spent on hotel: ₹4500

Money spent on transport: ₹2500

Money spent on food: ₹1600

Discount given by hotel manager: ₹500

Total money spent: Money spent on hotel transport and good - Discount given by hotel manager

	₹				P	
	(1)					
	4	5	0	0	0	0
	2	5	0	0	0	0
+	1	6	0	0	0	0
	8	6	0	0	0	0

	₹				P	
	8	6	0	0	0	0
–		5	0	0	0	0
	8	1	0	0	0	0

= ₹4500 + ₹2500 + ₹1600 – ₹500

= ₹8100.00

Answer: Total amount paid by Mr. Bhavesh is ₹8100.

5. Number of ribbons: 5

Cost of each ribbon: ₹48.25

Cost of 5 ribbons = Number of ribbons × Cost of each ribbon

= 5 × ₹48.25

= ₹241.25

	₹				
	(4)	(1)	(2)		
	4	8	.	2	5
×					5
2	4	1	.	2	5

Total money given – Total cost

= 500 – 241.25

= 258.75

Answer: Aaruhi will get back ₹258.75.

6. Total money Vishal earned by selling balls: ₹1900

Cost of 1 ball: ₹50

Total number of balls he sold: Total money earned by selling balls ÷ Cost of 1 ball

$$50\overline{)1900}\quad 38,\ -150,\ 400,\ -400,\ 00$$

= ₹1900 ÷ 50

= 38balls

Answer: Vishal sold 38 balls

7. Total number of pencils: 25

Cost of 1 pencil: Total number of pencils × Cost of 1 pencil

					₹
					(1)
					(2)
		2	5 .	1	0
×				2	5
	1	2	5	5	0
+	5	0	2	0	×
	6	2	7	5	. 0

= 25 × ₹25.10

= ₹627.5

Answer: Price of packet is ₹627.5

8. Number of calculator: 6

Price of calculator: ₹3000

Price of 1 calculator: Price of Calculators ÷ Number of calculators

= ₹3000 ÷ 6

= 500

Answer: Cost of each Calculators is ₹500

Skills Check

Cost of 1st item / pair of headphones = ₹145000

Cost of 2nd item / power ban = ₹950

Discount of 2nd item = ₹950 – ₹220

= ₹730

Total money Priya need to pay in total: Cost of pair of headphones + Cost of Power bank after cutting discount

= ₹1450 + ₹730

= ₹2180

Answer: Priya has to pay ₹2180 to the store.

Multiple Choice Questions

1. 1₹ = 100p

Number of 20p coins make 1₹ = $\frac{100p}{20p}$

= 5 Coins

Answer: (a) 5

2. 1₹ = 100p

₹525 = 525 × 100p = 52500p

Answer: (d) 52500 paise

3. 6500p

1p = $\frac{1}{1000}$₹

= ₹$\frac{6500}{100}$

= ₹65.00

Answer: (b) ₹65 and 00 paise

4. Number of 50 rupees notes makes ₹1000 = $\frac{₹1000}{₹50}$

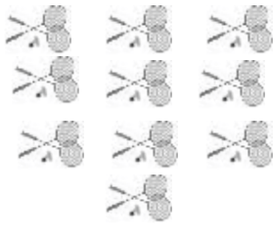
= 20 notes

Answer: (d) 20

13 Data Handling

Exercise 13.1

1. Number of children playing different games in park

Football		Football = 36 ÷ 6 : 6 
Cricket		Cricket = 30 ÷ 6 : 5 
Badminton		Badminton = 60 ÷ 6 : 10 
Volleyball		Volleyball = 6 ÷ 6 : 1 
Basketball		Basketball = 30 ÷ 6 : 5 

2. Number of people going to their jobs

Bus		1 = 10 people Bus: 50 ÷ 10 = 5 
Metro		Metro = 20 ÷ 10 : 2 
Walking		Walking = 30 ÷ 10 : 3 
Motor-cycle		Motorcycle = 30 ÷ 10 : 3 
Bicycle		Bicycle = 50 ÷ 10 : 5 

3. (a) Total number of student in library : Number of reading fairy tales + Bedtime stories + Novels + Geography + Encyclopedia × 10 (as each represents 10 students

= (6 + 9 + 10 + 4 + 4) × 10

= 33 × 10

= 330 Students

Answer: Ther are 330 Students in the library.

(b) Total number of students in fairytales: 6 × 10

Total number of students in bedtime stories = 9 × 10

= 90 students

Diffence between them = 90 students – 60 students

= 30 students

(c) Novels are read maximum by the students.

4. (a) Total number of fruit trees in the Orchard = 450

(b) Number of Orange trees = 8 × 15 (Each represents 15 trees)

= 120 trees

(c) Number of Apple tree = 5 × 15

= 75trees

Number of Pear trees = 4 × 15

= 60 trees

Number of Apple trees more than Pear tree = Number fo apple tree – Number of pear tree

= 75 – 60

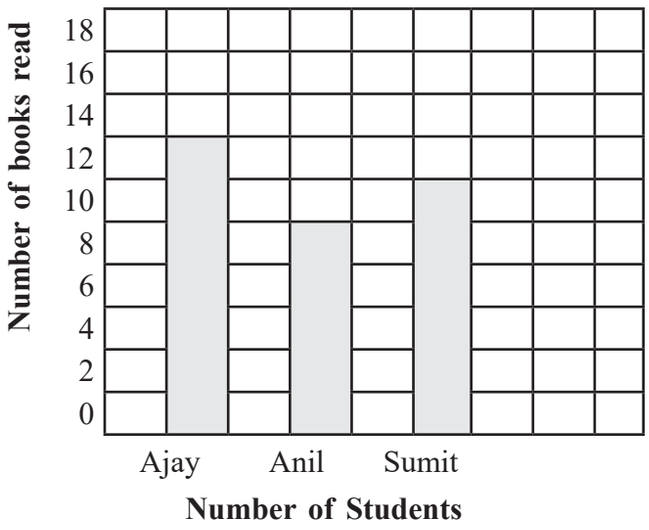
= 15 trees

Exercise 13.2

1. (a) Mars
(b) 6
(c) 12 – 2
= 10
(d) True
(e) Jupiter & Uranus

2. (a) Pepperoni pizza
(b) Tomato pizza = 50
Pepper pizza = 125
Total = 125 + 50 = 175
(c) Tomato
(d) 275 – 225 = 50
(e) 75 + 100 + 225 + 350 + 150 + 275
= 1175 pizzas

3.



Exercise 13.3

1. (a)

Dog	$\frac{1}{2}$
Cat	$\frac{1}{4}$
Other	$\frac{1}{4}$

(b) Fractions of people liking Cat = $\frac{1}{4}$
Total Number of people = 20
Total Number of liking cat = $\frac{1}{4} \times 20$
= 5 people
(c) Fraction of people liking dog: $\frac{1}{2}$
Total Number of people = 20
Number of people liking dogs: $\frac{1}{2} \times 20$
= 10 people

2. (a) Test I
(b) Test 5
(c) Test 2 and Test 3

3. (a) Hansel
(b) Harley
(c) Pratik

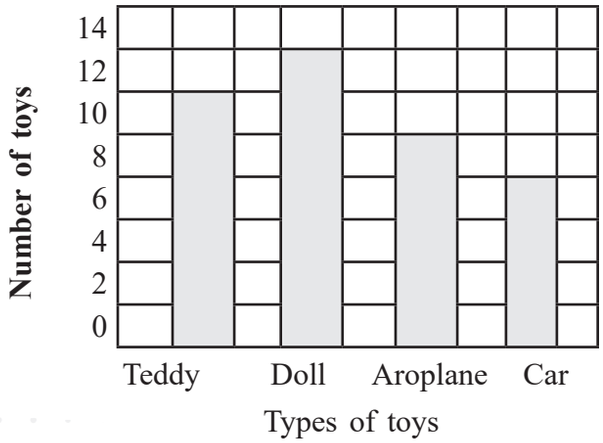
4. To be done by Students

Learing Updates

1. (a) Number of Anjeer ice-creams: 2 × 4 = 8 (1 represent 4 ice creams)
(b) Vanilla
(c) Anjeer
(d) Total number of ice-creams sold: Number of vanilla + Chocolate + strawberry + Anjeeer + Pista + Kaju)×4 (1 ice creams represent 4 ice creams)
= (7 + 4 + 6 + 2 + 4 + 3) × 4
= 26 × 4
= 104 ice-creams

2. (a) Class IV
(b) Class IV
(c) 4 classes
(d) 28 Students

3.



Multiple Choice Question

1. **Answer:** (b) vertical axis
2 **Answer:** (c) data
3. **Answer:** (a) pictograph

Skills Check

(a) English

(b) Total marks: Total marks in Semester I + Total marks in Semester II

= (95 + 80 + 70 + 60 + 70) + (80 + 80 + 90 + 45 + 60)

= 375 + 345

= 720

(c) Maths

(d) Science