CRISTO

NUMBER LAND

(Teacher Manual)

Class-4

Number Land Class - 4

1.1

1. a. 100000 – 1 = 99999 b. 99999 + 1 = 100000
   c. 10000 – 1 = 9999 d. 999999 + 1 = 1000000
2. a. 16980 = Sixteen thousand nine hundred eighty.
   b. 50079 = Fifty thousand seventy nine.
   c. 10045 = Ten thousand forty five.
   d. 64786 = Sixty four thousand seven hundred eighty six.
   e. 99404 = Ninety nine thousand four hundred four.
3. a. 42, 502 b. 12, 262 c. 30, 540 d. 80, 800 e. 90, 909
4. a. 99999 b. 1000000 c. 9999999 d. 100000

1.2

1. a. 6 — 60,00,000 b. 8 — 8, 00, 000 c. 3 — 30
   6 tens lakhs 8 lacs 3 tens
2. a. 7 — 7,00,000 b. 8 — 8,000,000
   7 hundred thousand 8 million
   c. 5 — 50,000 d. 2 — 200
   5 tens thousands 2 hundred
3. a. 5,73,560 — five lakh seventy three thousand five hundred sixty.
   b. 2,00,000 — Two lakh
   c. 6,35,208 — Six lakh thirty five thousand two hundred eight.
   d. 9,00,135 — Nine lakh one hundred thirty five.
   e. 43,981 — Forty three thousand nine hundred eighty one.
   f. 30,003 — Thirty thousand three.
4. a. 6,093,012 — six million ninety three thousand and twelve.
   b. 81,593,250 — Eighty one million five hundred ninety three thousand two hundred fifty.
   c. 5,999,502 — Five million nine hundred ninety nine thousand five hundred two.
   d. 476,816 — Four hundred seventy six thousand eighty hundred sixteen.
5. a. 5, 50, 000 b. 9, 95, 403 c. 90, 00, 909 d. 53, 26, 599
6. a. 4,044,404 b. 45,347,108 c. 63,605,372 d. 2,859,500
7. a. Ten lakhs b. 3000 thousands c. 100 lakhs d. 100 thousands

1.3

1. a. 5,11,02 b. 5,30,301 c. 3,415,201
2. a. 358,621 b. 75,445,208 c. 20,456,789
3. a. 734764 > 734644 b. 8536290 = 8536290
   c. 5187283 < 5188283 d. 1825246 < 1835246
4. a. 5,06,789 b. 1,03,467

5. a. 90,654 b. 60,899
6. a. 15,52,538 <16,46,370 < 16,64,730 < 17,62,538
   b. 14,827 < 2,55,133 < 6,13,286 < 7, 23, 141
   c. 19,25,110 < 19,25,116 < 19, 25,262 < 19,25,270
7. a. 8,00,000 > 5,00,000 > 78,625 > 63,945
   b. 2,497,625 > 2,495,625 > 2,494,625 > 2,394,625
   c. 5,91,520 > 5,91,340 > 5,91,332 > 5,90,420
8. a. 14,110, 15,110
   b. 9,30,200 11,30,200
   c. 10,30,295 10,31,295
   d. 74,15,120 74,15,125

1.4

1. a. 9865332 b. 9754320 c. 97643210 d. 9887322 e. 9876400
2. a. 23569 b. 1022568 c. 30578 d. 156789 e. 1023468

1.5

1. a. 8 b. 42 c. 44 d. 24
2. a. XXIX b. XLVI c. C d. D
3. a. XX > XVIII b. XX > X c. L = L d. L < D
4. a. XL XLI b. XX XXI c. XXVIII XXIX d. XXXVII XXXVIII
5. a. XIX XX b. XL XLI c. XLV XLVI d. XXXIV XXXV
6. a. X + IV = 10 + 4 = 14 = XIV
   b. XX – XI = 20 – 11 = 9 = IX
   c. L – XXX = 50 – 30 = 20 = XX
7. a. 30 + 7 = XXXVII b. 28 – 21 = VII c. 49 – 44 = V

Revision

1. a. 74,526 b. 9,22,617

	Predecessor		Successor
2. a.	92734	92735	92736
b.	8,57,008	8,57,009	8,57,010

3. a. 99,864 > 99,243 b. 1,72,352 < 1,72,698
4. a. 44, 040; 44,000; 40,440; 40,400; 40,004
   b. 3,78,234; 3,23,987; 3,12,785; 3,12,675; 30,534
5. a. 62,527 = 60,000 + 2,000 + 500 + 20 + 7
   b. 5,86,429 = 5,00,000 + 80, 000 + 6,000 + 400 + 20 + 9
6. a. 48,745 PV = 8,000 FV = 8
   b. 86,743 PV = 80,000 FV = 8
7. a. 63,106 = Sixty three thousand one hundred six.
   b. 4,19,560 = Four lakh nineteen thousand five hundred sixty.
   c. 724,403 = Seven hundred twenty four thousand four hundred and three.
   d. 807,049 = Eight hundred seven thousand and forty nine.

8. a. 11,683 b. 4,56,504 c. 862,392 d. 505,901
9. a. 66 = LXVI b. 83 = LXXXIII c. 43 = XLIII d. 99 = XCIX
10. a. LXIV + XL = 64 + 40 = 104 b. XCVI – LXXXIV = 96 – 84 = 12
c. LXXX – VIII = 80 – 8 = 72 =

2.1

1. a. (iv) Ones b. (ii) addends c. (i) sum d. (iii) 7738 e. (iv) 110
2. a.

	L	Tth	Th	H	T	O
	7	3	2	4	8	0
		3	0	0	0	7
+		2	2	3	0	0
	7	8	4	7	8	7

b.

	L	Tth	Th	H	T	O
	8	6	4	6	0	5
		1	5	1	7	0
+				2	2	2
	8	7	9	9	9	7

c.

	L	Tth	Th	H	T	O
	2	3	3	2	6	6
	4	5	4	0	2	3
+	2	0	2	3	0	0
	8	8	9	5	8	9

3. a.

	Tth	Th	H	T	O
	3	3	8	9	1
+	2	5	1	0	2
	5	8	9	9	3

b.

	Tth	Th	H	T	O
	5	3	0	2	1
+	2	3	7	1	5
	7	6	7	3	6

c.

	Tth	Th	H	T	O
	4	5	2	4	5
+	3	3	4	1	2
		1	0	2	1
	7	9	6	7	8

d.

	Tth	Th	H	T	O
	4	6	1	2	3
+	2	2	1	5	0
	1	0	3	2	4
	7	8	5	9	7

e.

	L	Tth	Th	H	T	O
	6	5	2	3	0	2
	0	1	3	4	2	5
+		3	1	2	7	1
	6	9	6	9	9	8

f.

	L	Tth	Th	H	T	O
	4	2	1	2	5	5
	1	3	0	3	0	3
+	3	4	1	2	2	0
	8	9	2	7	7	8

2.2

1. a. i) sum b. ii) 171690 c. iii) 627016

2. a.

	Tth	Th	H	T	O
	$8^{①}$	$6^{①}$	7	$0^{①}$	9
+	4	6	8	9	
	9	1	3	9	8

b.

	TL	L	Tth	Th	H	T	O
		$4^{②}$	$9^{①}$	$9^{②}$	$6^{①}$	$3^{①}$	1
+			5	2	7	0	8
		5	7	0	6	9	6
	1	1	2	3	0	3	5

b.

	TL	L	Tth	Th	H	T	O
		$5^{①}$	$4^{②}$	$8^{②}$	$7^{①}$	$0^{①}$	3
		1	1	2	4	9	9
+			2	8	3	0	0
		3	1	6	7	0	2
	1	0	0	6	2	0	4

d.

	TL	L	Tth	Th	H	T	O
	4	$3^{①}$	$5^{①}$	$6^{①}$	$3^{①}$	$4^{①}$	5
	4	2	4	5	6	7	3
+			6	3	4	5	6
	8	6	6	5	4	7	4

3. a.

	Tth	Th	H	T	O
	$1^{①}$	$8^{①}$	$7^{①}$	$2^{②}$	0
	3	2	3	4	3
			2	5	9
+	2	5	6	9	
	5	3	8	9	1

b.

	L	Tth	Th	H	T	O
	$5^{①}$	$3^{②}$	$8^{①}$	$4^{①}$	$9^{①}$	5
		5	6	4	3	4
+	3	2	6	5	3	2
	9	2	1	4	6	1

c.

	Tth	Th	H	T	O
	$1^{①}$	$5^{①}$	$0^{②}$	$6^{②}$	4
			1	0	8
		4	7	8	9
+	3	7	8	5	
	2	3	7	4	6

b.

	L	Tth	Th	H	T	O
	①	$4^{①}$	2	3	$2^{①}$	4
	4	3	8	1	0	2
+	2	5	4	1	2	6
	7	3	4	5	5	2

4. a. 13000 + 1500 + 140 = 14,640
   b. 80, 000 + 4000 + 1500 + 120 = 85, 620
   c. 16000 + 1600 + 160 = 17,760

2.3

1. a. number itself b. 93837 c. 72053

2. a. 26,546 b. 5650 c. 368989 d. 0
   e. 9,38,674 f. 12,369

2.4

1. Money with Mr. Verma = ₹ 1950500
   More money required = ₹ 107055

Cost of the house = ₹ 1950500 + ₹ 107055

$$\begin{array}{cccccccc} & 1^{\textcircled{1}} & 9 & 5 & 0 & 5 & 0 & 0 \\ + & 1 & 0 & 7 & 0 & 5 & 5 & \\ \hline 2 & 0 & 5 & 7 & 5 & 5 & 5 & \end{array}$$

Hence, total cost of house = ₹ 2057555

2. Difference between two number = 35078
Smaller number = 170452
Bigger number = 170452 + 35078

$$\begin{array}{cccccccc} & 1^{\textcircled{1}} & 7 & 0 & 4^{\textcircled{1}} & 5^{\textcircled{1}} & 2 & \\ + & 3 & 5 & 0 & 7 & 8 & & \\ \hline 2 & 0 & 5 & 5 & 3 & 0 & & \end{array}$$

Hence, bigger number is 205530

3. Milk sold in first month = 25515 *l*
Milk sold in second month = 19646 *l*
Milk sold in third month = 30336 *l*
Milk sold in fourth month = 26404 *l*
Milk sold in four month = 25515 *l* + 19646 *l* + 30336 *l* + 26404 *l*

$$\begin{array}{cccccccc} & & 2^{\textcircled{2}} & 5^{\textcircled{1}} & 5^{\textcircled{1}} & 1^{\textcircled{2}} & 5 & \\ + & 1 & 9 & 6 & 4 & 6 & & \\ & 3 & 0 & 3 & 3 & 6 & & \\ & 2 & 6 & 4 & 0 & 4 & & \\ \hline 1 & 0 & 1 & 9 & 0 & 1 & & \end{array}$$

Hence, total milk sold is 101901 *l*

4. No. of cars = 546825
No. of motor bikes = 32104
No. of scooters = 21412
No. of bicycle = 3948
Total no. of vehicles = 546825 + 32104 + 21412 + 3948

$$\begin{array}{cccccccc} 5 & 4^{\textcircled{1}} & 6^{\textcircled{2}} & 8^{\textcircled{1}} & 2^{\textcircled{2}} & 5 & & \\ 3 & 2 & 1 & 0 & 4 & 8 & & \\ & 2 & 1 & 4 & 1 & 2 & & \\ & + & 3 & 9 & 4 & 8 & & \\ \hline 8 & 9 & 3 & 2 & 3 & 3 & & \end{array}$$

Hence, total no. of vehicles are 893233

5. No. of English books = 8569
No. of science books = 7045
No. of other language book = 2600
Total no. of books = 8569 + 7045 + 2600

	$8^{①}$	$5^{①}$	$6^{①}$	9
	7	0	4	5
+	2	6	0	0
1	8	2	1	4

Hence, total no. of books are 18214

2.5

1. a. Minuend b. Subtrahend c. 81140

2. a.

	L	Tth	Th	H	T	O
	9	8	9	6	5	8
–	5	4	2	5	4	7
	4	4	7	1	1	1

b.

	L	Tth	Th	H	T	O
	4	5	6	8	9	8
–		3	4	8	2	4
	4	2	2	0	7	4

c.

	Tth	Th	H	T	O
	9	8	7	6	4
–	4	7	5	3	2
	5	1	2	3	2

b.

	L	Tth	Th	H	T	O
	6	5	3	8	0	7
–		3	0	0	0	2
	6	2	3	8	0	5

3. a.

	L	Tth	Th	H	T	O
	7	8	9	6	8	9
–	2	5	3	3	4	0
	5	3	6	3	4	9

b.

	L	Tth	Th	H	T	O
	8	8	8	9	8	2
–			7	9	0	0
	8	8	1	0	8	2

c.

	L	Tth	Th	H	T	O
	8	7	4	3	9	2
–	5	4	3	1	6	0
	3	3	1	2	3	2

d.

	L	Tth	Th	H	T	O
	6	6	0	0	0	6
–		4	0	0	0	4
	6	2	0	0	0	2

e.

	Tth	Th	H	T	O
	9	6	3	6	7
–	1	3	2	0	4
	8	3	1	6	3

f.

	Tth	Th	H	T	O
	7	9	7	7	8
–	1	2	7	5	3
	6	7	0	2	5

4. a.

Minuend	8	7	5	8	7
Subrahend –	5	3	4	2	6
	3	4	1	6	1

b.

Minuend	9	2	5	4	3
Subrahend –	6	1	0	3	2
	3	1	5	1	1

2.6

1. a. difference b. 53043 c. 57075

2. a.

$\cancel{1}^{0}\,\cancel{0}^{9}$	$\cancel{0}^{9}$	$\cancel{0}^{9}$	$\cancel{0}^{9}$	$\cancel{0}^{10}$	
– 9	9	9	9	9	
0	0	0	0	0	1

b.

	$\cancel{7}^{6}$	$\cancel{0}^{9}$	$\cancel{1}^{11}$	3	9	8
–	0	2	6	2	8	4
	6	7	5	1	1	4

c.

	$\cancel{8}^{7}$	$\cancel{6}^{16}$	4	$\cancel{6}^{5}$	$\cancel{3}^{13}$
–	3	8	0	2	5
	4	8	4	3	8

3.

$\cancel{4}^{3}$	$\cancel{3}^{13}$	$\cancel{3}^{2}$	$\cancel{1}^{11}$	$\cancel{6}^{5}$	$\cancel{3}^{13}$
– 6	1	8	5	9	
3	7	1	3	0	4

4.

1	$\cancel{6}^{5}$	$\cancel{0}^{9}$	$\cancel{0}^{9}$	$\cancel{4}^{14}$
– 1	0	8	7	
1	4	9	1	7

5.

	$\cancel{3}^{2}$	$\cancel{2}^{11}$	$\cancel{4}^{13}$	$\cancel{5}^{14}$	$\cancel{0}^{10}$
–	3	6	7	5	
	2	8	7	7	5

2.7

1. Amount deposited in bank = ₹ 79,070
   Amount withdraw = ₹ 11,782

	7	$\cancel{9}^{8}$	$\cancel{0}^{9}$	$\cancel{7}^{16}$	$\cancel{0}^{10}$
– 1	1	7	8	2	
6	7	2	8	8	

Amount left is ₹ 67288

2. Cost price of car = ₹ 75,500
   Amount in his account = ₹ 20,615
   Amount required more to purchase = ₹ 75,500 – ₹ 20,615

	7	$\cancel{3}^{2}$	$\cancel{5}^{14}$	$\cancel{0}^{9}$	$\cancel{0}^{10}$
– 2	0	6	1	5	
5	2	8	8	5	

Hence, he need ₹ 52885 more money to purchase the car.

3. Quantity of wheat in stock in November = 75,280 kg
Quantity of wheat sold in December = 35,488 kg
Left wheat in stock = 75,280 kg – 35,488 kg

$$\begin{array}{rrrrrr} & \cancel{7}^{\,6} & \cancel{5}^{\,14} & \cancel{2}^{\,11} & \cancel{8}^{\,17} & \cancel{0}^{\,10} \\ - & 3 & 8 & 4 & 8 & 8 \\ \hline & 3 & 6 & 7 & 9 & 2 \end{array}$$

Hence, 36,792 kg of wheat is left in stock.

4. Earnings of shopkeeper in one year = ₹ 8,80,960
Expenses for the year = ₹ 6,90,892
Save money at the end of year = ₹ 8,80,960 – ₹ 6,90,892

$$\begin{array}{rrrrrr} & \cancel{8}^{\,7} & \cancel{8}^{\,18} & 0 & \cancel{9}^{\,8} & \cancel{6}^{\,15} & \cancel{0}^{\,10} \\ - & 6 & 9 & 0 & 8 & 9 & 2 \\ \hline & 1 & 9 & 0 & 0 & 6 & 8 \end{array}$$

Hence, saving in one year is 1,90,068.

5. Amount with Nafisah = ₹ 64,500
Money spent = ₹ 20,701
Money left = ₹ 64,500 – ₹ 20,701

$$\begin{array}{rrrrrr} & 6 & \cancel{4}^{\,3} & \cancel{5}^{\,14} & \cancel{0}^{\,9} & \cancel{0}^{\,10} \\ - & 2 & 0 & 7 & 0 & 1 \\ \hline & 4 & 3 & 7 & 9 & 9 \end{array}$$

Hence, ₹ 43,799 are left with Nafisah.

6. Amount with Kuljeet = ₹ 63,373
Amount left = ₹ 9894
Amount paid to Jacob = ₹ 63,373 – ₹ 9894

$$\begin{array}{rrrrrr} & \cancel{6}^{\,5} & \cancel{3}^{\,12} & \cancel{3}^{\,12} & \cancel{7}^{\,16} & \cancel{3}^{\,13} \\ - & & 9 & 8 & 9 & 4 \\ \hline & 5 & 3 & 4 & 7 & 9 \end{array}$$

Hence, amount paid to Jacob is ₹ 53,479.

2.8

1. a. 9753 + 6427 – 3475

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

	1	~~6~~ (5)	~~1~~ (11)	~~8~~ (7)	~~0~~ (10)
–		3	4	7	5
	1	2	7	0	5

b. 7532 + 2663 – 3572

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

	1	~~0~~ (9)	~~1~~ (11)	9	5
–		3	5	7	2
		6	6	2	3

c.

	~~9~~ (8)	~~2~~ (12)	~~5~~ (4)	~~0~~ (9)	~~7~~ (17)
–	4	3	2	0	8
	4	9	2	9	9

	4	~~9~~ (8)	~~2~~ (12)	9	9
–	2	5	9	0	5
	2	3	3	9	4

d.

	5	4	~~3~~ (2)	~~0~~ (10)
–	1	3	2	5
	4	1	0	5

	~~4~~ (3)	~~1~~ (10)	~~0~~ (10)	5
–	3	2	4	2
	0	8	6	3

e.

	~~8~~ (7)	~~0~~ (10)	~~6~~ (5)	~~5~~ (15)	~~1~~
–	1	9	4	6	0
	6	1	1	9	1

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

f.

	5	~~8~~ (7)	~~4~~ (13)	~~3~~ (13)
–	5	7	8	9
	0	0	5	4

	2	1 (1)	5 (1)	7
+			5	4
	2	2	1	1

2. a. Total population = 9,165
No. of women = 3,975
No. of men = 4,162
No. of children = 9165 – (3975+4162)

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

	9	1	~~6~~ (5)	~~5~~ (15)
–	8	1	3	7
	1	0	2	8

Hence, no. o f children in the village is 1028

b. Total money with Mr. Yadav = ₹ 7, 05, 000
Money given to his wife = ₹ 1, 27, 500

Money given to his son = ₹ 24, 625
Money given to his daughter = 7, 05, 000 –
(1, 27, 500 + 24, 625)

$$\begin{array}{r} 1\ 2^{\textcircled{1}}\ 7^{\textcircled{1}}\ 5\ 0\ 0 \\ +\quad 2\ 4\ 6\ 2\ 5 \\ \hline 1\ 5\ 2\ 1\ 2\ 5 \end{array} \qquad \begin{array}{r} \cancel{7}^{\textcircled{6}}\ 0^{\textcircled{10}}\ \cancel{5}^{\textcircled{4}}\ 0^{\textcircled{9}}\ 0^{\textcircled{9}}\ 0^{\textcircled{10}} \\ -\ 1\ 5\ 2\ 1\ 2\ 5 \\ \hline 5\ 5\ 2\ 8\ 7\ 5 \end{array}$$

Hence, money recieved by the daughter is ₹ 5, 52, 875

c. Total money with Adam = ₹ 6, 41, 000
Money spent on house = ₹ 3, 75, 380
Money spent on car = ₹ 1, 86, 275
Total money spent = 3, 75, 380 + 1, 86, 275

$$\begin{array}{r} 3^{\textcircled{1}}7^{\textcircled{1}}\ 5\ 3^{\textcircled{1}}8\ 0 \\ +\ 1\ 8\ 6\ 2\ 7\ 5 \\ \hline 5\ 6\ 1\ 6\ 5\ 5 \end{array}$$

Money left with Adam = 6, 41, 000 – 5, 61, 655

$$\begin{array}{r} \cancel{6}^{\textcircled{5}}\ \cancel{4}^{\textcircled{13}}\ \cancel{1}^{\textcircled{10}}\ 0^{\textcircled{9}}\ 0^{\textcircled{9}}\ 0^{\textcircled{10}} \\ -\ 5\ 6\ 1\ 6\ 5\ 5 \\ \hline 0\ 7\ 9\ 3\ 4\ 5 \end{array}$$

Hence, money left with Adam is ₹ 79, 345

d. Milk produced in one day = 40500 *l*
Milk supplied to one town = 18, 680 *l*
Milk supplied to another town = 10, 596 *l*
Total milk supplied = 18, 680 *l* + 10, 596 *l*

$$\begin{array}{r} 1\ 8^{\textcircled{1}}\ 6^{\textcircled{1}}\ 8\ 0 \\ +\ 1\ 0\ 5\ 9\ 6 \\ \hline 2\ 9\ 2\ 7\ 6 \end{array}$$

Milk left with dairy = 40500 *l* – 29276 *l*

$$\begin{array}{r} \cancel{4}^{\textcircled{3}}\ 0^{\textcircled{10}}\ \cancel{5}^{\textcircled{4}}\ 0^{\textcircled{9}}\ 0^{\textcircled{10}} \\ -\ 2\ 9\ 2\ 7\ 6 \\ \hline 1\ 1\ 2\ 2\ 4 \end{array}$$

Hence, milk left with dairy on that day is 11224 *l*

Revision

1. a. (iii) 5020 b. (i) 8000 – 4753 = 3247
   c. (iv) 8007 – 807 = 1300 + ...
   7200 – 1300 = 5900
   d. (i) 2183 – ..... = 16483
   21483 – 16483 = 5000
   e. Difference between two numbers = 15096
   Greatest number = 90451
   Smaller number = 90451 – 15096

$$\begin{array}{r} \not{9}^{\,(8)}\ \not{0}^{\,(10)}\ \not{4}^{\,(3)}\ \not{5}^{\,(14)}\ \not{1}^{\,(11)} \\ -\ 1\ 5\ 0\ 9\ 6 \\ \hline 7\ 5\ 3\ 5\ 5 \\ \hline \end{array}$$

   (iii) 75355

3.1

1. a. 436 × 10 = 4360
   b. 8 × 200 = 8 × 2 × 100 = 1600
   c. 123 × 80 = 123 × 8 × 10 = 9840
   d. 700 × 600 = 7 × 6 × 100 × 100 = 420000
   e. 136 × 0 = 0
   f. 93 × 100 = 93 × 1 × 100 = 9300
   g. 239 × 1 = 239
   h. 156 × 0 = 0
2. a. 106 b. 50 c. 316 d. 1 e. 20 × 14
3. a. 7 × 1000 = 7000 b. 248 × 2000 = 248 × 2 × 1000 = 496000
   c. 11 × 8000 = 11 × 8 × 1000 = 88000
   d. 325 × 5000 = 325 × 5 × 1000 = 1625000
   e. 20 × 8000 = 2 × 8 × 10 × 1000 = 160000
   f. 15 × 6000 = 15 × 6 × 1000 = 90000
   g. 514 × 400 = 514 × 4 × 100 = 205600
   h. 519 × 700 = 519 × 7 × 100 = 363300
4. a. 9 (5310 ÷ 59) b. 1000 (85000 ÷ 85)
   c. 4000 = (624000 ÷ 156) d. 10 = (2100 ÷ 210)
   e. 20 = (5200 ÷ 260) f. 100 = (32400 ÷ 324)

3.2

a.

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

b.

$$\begin{array}{r} 8\ 6\ 9 \\ \times\ 1\ 7 \\ \hline 6\ 0\ 8\ 3 \\ +8\ 6\ 9\ 0 \\ \hline 1\ 4\ 7\ 7\ 3 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 896 \\ \times\ 23 \\ \hline 2688 \\ +17920 \\ \hline 20608 \end{array}$$

d.
$$\begin{array}{r} 3156 \\ \times\ 535 \\ \hline 15780 \\ 94680 \\ +1578000 \\ \hline 1688460 \end{array}$$

e.
$$\begin{array}{r} 9205 \\ \times\ 203 \\ \hline 27615 \\ 00000 \\ +1841000 \\ \hline 1868615 \end{array}$$

f.
$$\begin{array}{r} 4038 \\ \times\ 674 \\ \hline 16152 \\ 282660 \\ +2422800 \\ \hline 2721612 \end{array}$$

g.
$$\begin{array}{r} 5367 \\ \times\ 149 \\ \hline 48303 \\ 214680 \\ +536700 \\ \hline 799683 \end{array}$$

h.
$$\begin{array}{r} 4003 \\ \times\ 307 \\ \hline 28021 \\ 00000 \\ +1200900 \\ \hline 1228921 \end{array}$$

3.3

1. No. of guavas in one basket = 127
   No. of guavas in 206 basket = 127 × 206

$$\begin{array}{r} {\scriptstyle ①\ ④} \\ 127 \\ \times\ 206 \\ \hline {\scriptstyle ①}\ 762 \\ 0000 \\ +25400 \\ \hline 26162 \end{array}$$

   Hence, there are 26162 guavas in 206 baskets

2. No. of clips in one packet = 576
   No. of clips in 24 packets = 576 × 24

$$\begin{array}{r} {\scriptstyle ③\ ②} \\ 576 \\ \times\ 24 \\ \hline 2304 \\ +11520 \\ \hline 13824 \end{array}$$

   Hence, there are 13824 clips in 24 packets

3. No. of books in one almira = 428

No. of books in 140 almira = 428 × 140

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

Hence, there are 59920 books in 140 almirahs.

4. No. of apples in one box = 124

No. of apples in 130 boxes = 124 × 130

$$\begin{array}{r} 1\ 2\ 4 \\ \times\ 1\ 3\ 0 \\ \hline 0\ 0\ 0 \\ {\scriptstyle ①}\ 3\ 7\ 2\ 0 \\ +\ 1\ 2\ 4\ 0\ 0 \\ \hline 1\ 6\ 1\ 2\ 0 \end{array}$$

Hence, there are 16120 apples in 130 boxes.

5. Cost of one toys is = ₹ 697

Cost of 369 toys = ₹ 697 × 369

$$\begin{array}{r} {\scriptstyle ⑧\ ⑥}\ 6\ 9\ 7 \\ \times\ 3\ 6\ 9 \\ \hline 6{\scriptstyle ①}2\ 7\ 3 \\ {\scriptstyle ①}\ 4\ 1\ 8\ 2\ 0 \\ +\ 2\ 0\ 9\ 1\ 0\ 0 \\ \hline 2\ 5\ 7\ 1\ 9\ 3 \end{array}$$

Hence, Cost of 369 toys are ₹ 257193.

6. No. of banana tree rows = 76

No. of banana tree in one row = 62

Total no. of banana tree = 76 × 62

$$\begin{array}{r} {\scriptstyle ①}\ 7\ 6 \\ \times\ 6\ 2 \\ \hline 1{\scriptstyle ①}5\ 2 \\ +\ 4\ 5\ 6\ 0 \\ \hline 4\ 7\ 1\ 2 \end{array}$$

Hence, there are 4712 banana trees

7. Contribution by each students = ₹ 200
Total no. of students = 1585
Total money collected = ₹ 200 × 1585

$$\begin{array}{r} {\scriptstyle ①\ ①\ \ ①} \\ 1\ 5\ 8\ 2\ 5 \\ \times\ \ 2 \\ \hline 3\ 1\ 6\ 5\ 0 \end{array}$$

Hence, total money collected is ₹ 3165000.

3.4

1. a. 32 × 47
32 ⟶ 30
47 ⟶ 50
30 × 50 = 1500

b. 68 × 51
68 ⟶ 70
51 ⟶ 50
70 × 50 = 3500

c. 79 × 22
79 ⟶ 80
22 ⟶ 20
80 × 20 = 1600

d. 69 × 38
69 ⟶ 70
38 ⟶ 40
70 × 40 = 2800

2. a. 564 × 429
564 ⟶ 600
429 ⟶ 400
600 × 400 = 240000

b. 388 × 398
388 ⟶ 400
398 ⟶ 400
400 × 400 = 160000

c. 712 × 979
712 ⟶ 700
979 ⟶ 1000
700 × 1000 = 700000

d. 288 × 117
288 ⟶ 300
117 ⟶ 100
300 × 100 = 30000

3. a. 47 × 52
47 ⟶ 50
52 ⟶ 50
50 × 50 = 2500

b. 87 × 64
87 ⟶ 90
64 ⟶ 60
90 × 60 = 5400

c. 35 × 75
35 ⟶ 40
75 ⟶ 80
40 × 80 = 3200

d. 68 × 57
68 ⟶ 70
57 ⟶ 60
70 × 60 = 4200

4. a. 378 × 123
378 ⟶ 400
123 ⟶ 100
400 × 100 = 40000

b. 159 × 139
159 ⟶ 200
139 ⟶ 100
200 × 100 = 20000

c. 192 × 151
192 ⟶ 200
151 ⟶ 200
200 × 200 = 40000

d. 692 × 314
692 ⟶ 700
314 ⟶ 300
700 × 300 = 210000

Revision

1. a. repeated b. 1000 c. 2135000 d. 0

e.
```
5125)128125(25
    −10250↓
      25625
      25625
          0
```
25

f. 777 g. number itself

h. Cost of 1 m = ₹ 725

Cost of 10 m = ₹ 725 ×10 = ₹ 7250

2. a. 1368 × 200 = 1368 × 2 × 100 = 273600

b. 936 × 500 = 936 × 5 × 100 = 468000

c. 1859 × 900 = 1859 × 9 × 100 = 1673100

3. a. 1423 × 914
```
        1 4 2 3
        × 9 1 4
        5 6 9 2
      1 4 2 3 0
  + 1 2 8 0 7 0 0
    1 3 0 0 6 2 2
```

b. 2106 × 716
```
        2 1 0 6
        × 7 1 6
      1 2 6 3 6
      2 1 0 6 0
  + 1 4 7 4 2 0 0
    1 5 0 7 8 3 6
```

c. 1023 × 570
```
        1 0 2 3
        × 5 7 0
        0 0 0 0
      7 1 6 1 0
  + 5 1 1 5 0 0
    5 8 3 1 1 0
```

4. a. 275 × 49

275 ⟶ 280

49 ⟶ 50

280 × 50 = 14000

b. 982 × 11

982 ⟶ 980

11 ⟶ 10

980 × 10 = 9800

c. 6327 × 348

6327 ⟶ 6330

348 ⟶ 350

6330 × 350 = 633 × 35 × 10 × 10
```
      6 3 3
      × 3 5
    3 1 6 5
  1 8 9 9 0
  2 2 1 5 5
```
= 2215500

5. a. 315×275
$315 \longrightarrow 300$
$275 \longrightarrow 300$
$300 \times 300 = 90000$

b. 982×110
$982 \longrightarrow 1000$
$110 \longrightarrow 100$
$1000 \times 100 = 100000$

c. 6327×2519
$6327 \longrightarrow 6300$
$2519 \longrightarrow 2500$
$6300 \times 2500 = 63 \times 25 \times 100 \times 100$

$$\begin{array}{r} {\scriptstyle ①}\\ 6\ 3\\ \times\ 2\ 5\\ \hline 3\ 1\ 5\\ 1\ 2\ 6\ 0\\ \hline 1\ 5\ 7\ 5\\ \hline \end{array}$$

$= 15750000$

4.1

1. a. 1 b. 3 c. 200
d. 0 e. 398 f. 0
2. Dividend = Divisor × Quotient + Remainder
a. $5 \times 6 + 2 = 30 + 2 = 32$
b. $9 \times 7 + 1 = 63 + 1 = 64$
c. $3 \times 4 + 2 = 12 + 2 = 14$
d. $6 \times 8 + 1 = 48 + 1 = 64$
3. a. $28 \div 2 = 14$
$28 \div 14 = 2$

b. $72 \div 8 = 9$
$72 \div 9 = 8$

c. $64 \div 4 = 16$
$64 \div 16 = 4$

d. $1080 \div 12 = 90$
$1080 \div 90 = 12$

e. $1190 \div 17 = 70$
$1190 \div 70 = 17$

f. $250 \div 10 = 25$
$250 \div 25 = 10$

4. a. $11\overline{)1\,3\,2\,(12}$

$$\begin{array}{r} -\ 1\ 1\downarrow\\ \hline 2\ 2\\ -\ 2\ 2\\ \hline 0\\ \hline \end{array}$$

$Q = 12$
$R = 0$
Verification
Dividend = Divisor × Quotient + Remainder
$132 = 11 \times 12 + 0$
$132 = 132$
LHS = RHS
Hence verified

b.

9) 9 3 7 (104
− 9 ↓ ↓
0 3 7
− 3 6
1

Q = 104
R = 1
Verification
Dividend = Divisor × Quotient + Remainder
937 = 9 × 104 + 1
937 = 936 + 1
937 = 937
LHS = RHS
Hence verified

c.

5) 2 5 8 (51
− 2 5 ↓
0 8
− 5
3

Q = 51
R = 3
Verification
Dividend = Divisor × Quotient + Remainder
258 = 5 × 51 + 3
258 = 255 + 3
258 = 258
LHS = RHS
Hence verified

d.

7) 1 5 7 (22
− 1 4 ↓
1 7
− 1 4
3

Q = 22
R = 3
Verification
Dividend = Divisor × Quotient + Remainder
157 = 7 × 22 + 3
157 = 154 + 3
157 = 157
LHS = RHS
Hence verified

4.2

a. $3\overline{)4040}\,(1346$

$-3\downarrow$
10
$-9\downarrow$
14
-12
20
-18
2

Q = 1346
R = 2
Verification
Dividend = Divisor × Quotient + Remainder
4040 = 3 × 1346 + 2
4040 = 4038 + 2
4040 = 4040
LHS = RHS
Hence verified

b. $5\overline{)1097}\,(219$

$-10\downarrow$
09
$-5\downarrow$
47
-45
2

Q = 219
R = 2
Verification
Dividend = Divisor × Quotient + Remainder
1097 = 5 × 219 + 2
1097 = 1095 + 2
1097 = 1097
LHS = RHS
Hence verified

c. $9\overline{)5692}(632$

$-54\downarrow$

29

$-27\downarrow$

22

-18

4

Q = 632

R = 4

Verification

Dividend = Divisor × Quotient + Remainder

5692 = 9 × 632 + 4

5692 = 5688 + 4

5692 = 5692

LHS = RHS

Hence verified

d. $7\overline{)8506}(1215$

$-7\downarrow$

15

$-14\downarrow$

10

$-7\downarrow$

36

-35

1

Q = 1215

R = 1

Verification

Dividend = Divisor × Quotient + Remainder

8506 = 7 × 1215 + 1

8506 = 8505 + 1

8506 = 8506

LHS = RHS

Hence verified

e. $5\overline{)4535}(907$

$-45\downarrow\downarrow$

035

35

0

Q = 907
R = 0
Verification
Dividend = Divisor × Quotient + Remainder
4535 = 5 × 907 + 0
4535 = 4535 + 0
4535 = 4535
LHS = RHS
Hence verified

f. $6\overline{)6017}\,(1002$

$-6\downarrow$
00
$-0\downarrow\downarrow$
017
-12
5

Q = 1002

R = 5

Verification

Dividend = Divisor × Quotient + Remainder

6017 = 6 × 1002 + 5

6017 = 6012 + 5

6017 = 6017

LHS = RHS

Hence verified

g. $7\overline{)3538}\,(505$

$-35\downarrow\downarrow$
038
35
3

Q = 505
R = 3
Verification
Dividend = Divisor × Quotient + Remainder
3538 = 7 × 505 + 3
3538 = 3535 + 3
3538 = 3538
LHS = RHS

Hence verified

h. $8\overline{)6784}(848$

$-64\downarrow$

38

$-32\downarrow$

064

-64

0

Q = 848

R = 0

Verification

Dividend = Divisor × Quotient + Remainder

6784 = 8 × 848 + 0

6784 = 6784 + 0

6784 = 6784

LHS = RHS

Hence verified

i. $9\overline{)7245}(805$

$-72\downarrow\downarrow$

045

45

0

Q = 805

R = 0

Verification

Dividend = Divisor × Quotient + Remainder

7245 = 9 × 805 + 0

7245 = 7245 + 0

7245 = 7245

LHS = RHS

Hence verified

j. $4\overline{)4440}(1110$

$-4\downarrow$

04

$-4\downarrow$

04

-4

00

-0

0

Q = 1110
R = 0
Verification
Dividend = Divisor × Quotient + Remainder
4440 = 4 × 1110 + 0
4440 = 4440 + 0
4440 = 4440
LHS = RHS
Hence verified

k. $9\overline{)1827}(203$
$-18\downarrow\downarrow$
027
-27
0

Q = 203
R = 0
Verification
Dividend = Divisor × Quotient + Remainder
1827 = 9 × 203 + 0
1827 = 1827 + 0
1827 = 1827
LHS = RHS
Hence verified

l. $5\overline{)4289}(857$
$-40\downarrow$
028
$-25\downarrow$
039
-35
04

Q = 857
R = 4
Verification
Dividend = Divisor × Quotient + Remainder
4289 = 5 × 857 + 4
4289 = 4285 + 4
4289 = 4289
LHS = RHS
Hence verified

4.3

1. a.

$$17\overline{)1733}\,(101$$
$$-\,17\downarrow\downarrow$$
$$033$$
$$-\,17$$
$$16$$

Q = 101

R = 16

Verification

Dividend = Divisor × Quotient + Remainder

1733 = 17 × 101 + 16

1733 = 1717 + 16

4289 = 1733

LHS = RHS

Hence verified

b.

$$35\overline{)7543}\,(215$$
$$-\,70\downarrow$$
$$54$$
$$-\,35\downarrow$$
$$193$$
$$-\,175$$
$$18$$

Q = 215

R = 18

Verification

Dividend = Divisor × Quotient + Remainder

7543 = 35 × 215 + 18

7543 = 7525 + 18

7543 = 7543

LHS = RHS

Hence verified

c.

$$25\overline{)9625}\,(385$$
$$-\,75\downarrow$$
$$212$$
$$-200\downarrow$$
$$125$$
$$-\,125$$
$$0$$

Q = 385

R = 0

Verification

Dividend	= Divisor × Quotient + Remainder
9625	= 25 × 385 + 0
9625	= 9625 + 0
9625	= 9625
LHS	= RHS

Hence verified

d. 25) 5 3 7 8 (215
   − 5 0↓
       3 7
     − 2 5↓
       1 2 8
     − 1 2 5
           3

Q = 215

R = 3

Verification

Dividend	= Divisor × Quotient + Remainder
5378	= 25 × 215 + 3
5378	= 5375 + 3
5378	= 5378
LHS	= RHS

Hence verified

e. 38) 8 5 8 8 (226
   − 7 6↓
       9 8
     − 7 6↓
       2 2 8
     − 2 2 8
           0

Q = 226

R = 0

Verification

Dividend	= Divisor × Quotient + Remainder
8588	= 38 × 226 + 0
8588	= 8588 + 0
8588	= 8588
LHS	= RHS

Hence verified

f. $82\overline{)1558}(19$

$-\ 82\downarrow$

738

$-\ 738$

0

Q = 19

R = 0

Verification

Dividend = Divisor × Quotient + Remainder

1558 = 82 × 19 + 0

1558 = 1558 + 0

1558 = 1558

LHS = RHS

Hence verified

g. $75\overline{)8700}(116$

$-\ 75\downarrow$

120

$-\ 75\downarrow$

450

$-\ 450$

0

Q = 116

R = 0

Verification

Dividend = Divisor × Quotient + Remainder

8700 = 75 × 116 + 0

8700 = 8700 + 0

8700 = 8700

LHS = RHS

Hence verified

h. $42\overline{)8986}(213$

$-\ 84\downarrow$

58

$-\ 42\downarrow$

166

$-\ 126$

40

Q = 213

R = 40

Verification

Dividend = Divisor × Quotient + Remainder
8986 = 42 × 213 + 40
8986 = 8946 + 40
8986 = 8986
LHS = RHS
Hence verified

i.
$$\begin{array}{r} 161 \\ 14\overline{)2258} \\ -14\downarrow \\ \hline 85 \\ -84\downarrow \\ \hline 18 \\ -14 \\ \hline 4 \end{array}$$
Q = 161
R = 4
Verification
Dividend = Divisor × Quotient + Remainder
2258 = 14 × 161+ 4
2258 = 2254 + 4
2258 = 2258
LHS = RHS
Hence verified

j.
$$\begin{array}{r} 113 \\ 45\overline{)5093} \\ -45\downarrow \\ \hline 59 \\ -45\downarrow \\ \hline 143 \\ -135 \\ \hline 8 \end{array}$$
Q = 113
R = 8
Verification
Dividend = Divisor × Quotient + Remainder
5093 = 45 × 113 + 8
5093 = 5085 + 8
5093 = 5093
LHS = RHS
Hence verified

k.
$$\begin{array}{r} 467 \\ 18\overline{)8421} \\ -72\downarrow \\ \hline 122 \\ -108\downarrow \\ \hline 141 \\ -126 \\ \hline 15 \end{array}$$

Q = 467
R = 15
Verification
Dividend = Divisor × Quotient + Remainder
8421 = 18 × 467 + 15
8421 = 8406 + 15
8421 = 8421
LHS = RHS
Hence verified

l. 42)4857(115
−42↓
65
−42↓
237
−210
27

Q = 115
R = 27
Verification
Dividend = Divisor × Quotient + Remainder
4857 = 42 × 115 + 27
4857 = 4830 + 27
4857 = 4857
LHS = RHS
Hence verified

2. Dividend = Divisor × Quotient + Remainder

a. 6500 = 10 × 650 + Remainder
6500 − 6500 = Remainder
0 = Remainder

b. 4365 = Divisor × 485 + 0
4365 ÷ 485 = Divisor

485)4365(9
−4365
0

c. 15)3875(258
−30↓
87
−75↓
125
−120
5

Q = 258
R = 5

d. Dividend = 723 × 8 + 5
= 5784 + 5
= 5789

4.4

1. a. 9760 ÷ 10
Q = 976
R = 0

b. 63756 ÷ 100
Q = 637
R = 56

c. 56860 ÷ 1000
Q = 56
R= 860

d. 419000 ÷ 1000
Q = 419
R = 0

e. 285000 ÷ 100
Q = 2850
R = 0

f. 30097 ÷ 100
Q = 300
R = 97

g. 800703 ÷ 10
Q = 80070
R = 3

h. 202837 ÷ 1000
Q = 202
R = 837

4.5

1. a. 63 ÷ 29
= 60 ÷ 30 = 2

b. 588 ÷ 23
= 600 ÷ 20 = 30

c. 929 ÷ 29
= 900 ÷ 30 = 30

d. 632 ÷ 33
= 600 ÷ 30 = 20

e. 701 ÷ 18
= 700 ÷ 20 = 35

f. 88 ÷ 29
= 90 ÷ 30 = 3

g. 815 ÷ 41
= 800 ÷ 40 = 20

h. 490 ÷ 52
= 500 ÷ 50 = 10

i. 704 ÷ 66
= 700 ÷ 70 = 10

4.6

1. Total pencils = 4316
No. of pencils in each packet = 12
No. of pencils boxes = 4316 ÷ 12

```
12 ) 4 3 1 6 ( 359
   - 3 6 ↓
     7 1
   - 6 0 ↓
     1 1 6
   - 1 0 8
       8
```

Q = 359
R = 8
Hence, 359 pencils can be packed and 8 pencils will be left unpacked.

2. No. of chocolates in one packet = 24
Total chocolates = 600
No. of packets required = 600 ÷ 24

$$\begin{array}{r} 24\overline{)600}(25 \\ -48\downarrow \\ \hline 120 \\ -120 \\ \hline 0 \\ \hline \end{array}$$

Hence, there are 25 packets.

3. Total bags of cement = 6072

   No. of bags in each cart = 24

   No. of carts needed = 600 ÷ 24

$$\begin{array}{r} 24\overline{)6072}(253 \\ -48\downarrow\ \ \\ \hline 127\ \ \\ -120\downarrow \\ \hline 72 \\ -72 \\ \hline 0 \\ \hline \end{array}$$

Hence, 253 carts are needed to clear 6072 bags of cement.

4. Total no. of students in school = 1620

   No. of students in one bus = 45

   No. of buses required = 1620 ÷ 45

$$\begin{array}{r} 45\overline{)1620}(36 \\ -135\downarrow \\ \hline 270 \\ -270 \\ \hline 0 \\ \hline \end{array}$$

Hence, school required 36 buses.

5. Product of two numbers = 3645

   One of the no. = 15

   Other no. = 3645 ÷ 15

$$\begin{array}{r} 15\overline{)3645}(243 \\ -30\downarrow\ \ \\ \hline 64\ \ \\ -60\downarrow \\ \hline 45 \\ -45 \\ \hline 0 \\ \hline \end{array}$$

Hence, other no. is 243.

6. Product of two numbers = 8496

   One of the no. = 36

   Other no. = 8496 ÷ 36

$$
\begin{array}{r}
36\overline{)8496}\,(236 \\
-\,72\downarrow \\
\hline
129 \\
-108\downarrow \\
\hline
216 \\
-\,216 \\
\hline
0
\end{array}
$$

Hence, other no. is 236.

7. No. of coins with ₹ 1 denomination = 4300
   No. of ₹ 100 notes she gets in exchange = 4300 ÷ 100
   = 43 notes

8. Capacity of oil tank = 3850 *l*
   Capacity of oil in each bucket = 35 *l*
   No. of buckets needed to filled out it = 3850 ÷ 35

$$
\begin{array}{r}
35\overline{)3850}\,(110 \\
-\,35\downarrow \\
\hline
35 \\
-\,35\downarrow \\
\hline
00 \\
-\,0 \\
\hline
0
\end{array}
$$

Hence, no. of bucket is 110.

4.7

1.

a. $7 \div 1 + (8 \times 6) + 18 - 12$
$= 7 + 48 + 6 = 61$

b. $32 \div 8 \times 10 - 18$
$= 4 \times 10 - 18$
$= 40 - 18 = 22$

c. $25 - 4 \times 3 + 22$
$= 25 - 12 + 22$
$= 47 - 12 = 35$

d. $55 \div 11 + 7 \times 6$
$= 5 + 42 = 47$

e. $36 \div 6 \times 7$
$= 6 \times 7 = 42$

f. $16 \times 2 + 30 \div 6$
$= 32 + 5 = 37$

g. $28 \div 7 + 8 \times 5$
$= 4 + 40 = 44$

h. $25 \div 5 + 81 \div 9$
$= 5 + 9 = 14$

2.

a. $24 \div 6 + 7 \times 7$
$= 4 + 49 = 53$

b. $(2 \times 3 \times 9 \div 9) - 2 \times (6 + 8) \div 7$
$= (6 \times 1) - 2 \times 14 \div 7$
$= 6 - 2 \times 2$
$= 6 - 4 = 2$

c. $5 \times 12 \div 10 - (6 \times 4) \div 12$
$= 5 \times 1.2 - 24 \div 12$
$= 6.0 - 2$
$= 4$

d. $25 - 4 \times (7 + 5) \div 4 + 3$
$= 25 - 4 \times 12 \div 4 + 3$
$= 25 - 4 \times 3 + 3$
$= 25 - 12 + 3$
$= 28 - 12 = 16$

Revision

1. a. 974 ÷ 10 Q = 97 R = 4
   b. 1463 ÷ 10 Q = 146 R = 3
   c. 4672 ÷ 100 Q = 46 R = 72
   d. 7042 ÷ 1000 Q = 7 R = 042
   e. 13400 ÷ 100 Q = 134 R = 00
   f. 13246 ÷ 1000 Q = 13 R = 246
2. Total trees in garden = 2448
   No. of groups = 6
   No. of trees in each group = 2448 ÷ 6

```
6)2448(408
 -24↓↓
  048
  -48
    0
```

   Hence, 408 trees are in each group.
3. Total Photographs = 1240
   No. of albums = 9
   No. of photographs in one album = 1240 ÷ 9

```
9)1240(137
 - 9↓  |
  34   |
 -27↓  |
  70
  -63
   7
```

   Hence, 137 photos can be arranged in one album and 7 photoes will be left in the end.
4. a. $27 \div 9 + 13 \times 2$
   $= 3 + 26 = 29$
   b. $950 \div 19 - 5 \times 4$
   $= 50 - 20 = 30$
   c. $(99 \div 11) + 64 \div 8$
   $= 9 + 8 = 17$

5.1

1. a.

```
9) 6 3 (7
 − 6 3
   ----
     0
```

Since, 9 divides 63 exactly without remainder

∴ 9 is a factor of 63 as

b.

```
8) 8 1 (10
 − 8 ↓
   ----
   0 1
   − 0
   ----
     1
```

Since, on dividing 81 by 8, we get 1 as remainder.

∴ 81 is not factor of 8.

c.

```
11) 1 2 1 0 (110
  − 1 1 ↓
    -----
      1 1
    − 1 1 ↓
      -----
        0 0
        − 0
      -----
          0
```

Since, 11 divides 120 exactly without remainder.

∴ 11 is a factor of 1210.

d.

```
15) 2 2 5 (15
  − 1 5 ↓
    -----
      7 5
    − 7 5
    -----
        0
```

Since, 15 divides 225 exactly without remainder.

∴ 15 is a factor of 225.

e.

```
8) 0 (0
 − 0
   --
   0
```

Yes, 8 is a factor of 0

f. 0 is not a factor of 45

2. a. 98

$1 \times 98 = 98$

$2 \times 49 = 98$

$7 \times 14 = 98$

factors of 98 are 1, 2, 7, 14, 49, 98

b. 64

$1 \times 64 = 64$
$2 \times 32 = 64$
$4 \times 16 = 64$
$8 \times 8 = 64$
factors of 64 are 1, 2, 4, 8, 16, 32, 64

c. 136

$1 \times 136 = 136$
$2 \times 68 = 136$
$4 \times 34 = 136$
$8 \times 17 = 136$
factors of 136 are 1, 2, 4, 8, 17, 34, 68, 136

d. 108

$1 \times 108 = 108$
$2 \times 54 = 108$
$3 \times 36 = 108$
$4 \times 27 = 108$
$6 \times 18 = 108$
$9 \times 12 = 108$
factors of 136 are 1, 2, 4, 6, 9, 12, 18, 27, 36, 54, 108

3. a.

$$
\begin{array}{r}
216 \\
6\overline{)1296} \\
-12\downarrow \\
\hline
09 \\
-6\downarrow \\
\hline
36 \\
-36 \\
\hline
0 \\
\hline
\end{array}
$$

Since, 6 divides 1296 exactly without remainder.
$\therefore$ 6 is a factor of 1296.

b.

$$
\begin{array}{r}
34 \\
8\overline{)274} \\
-24\downarrow \\
\hline
34 \\
-32 \\
\hline
2 \\
\hline
\end{array}
$$

Since, on dividing 274 by 8, it leaves 2 as remainder.
$\therefore$ 8 is not a factor of 274.

4. a.

$$
\begin{array}{r}
89 \\
14\overline{)1246} \\
-112\downarrow \\
\hline
126 \\
-126 \\
\hline
0 \\
\hline
\end{array}
$$

Since, 14 divides 1246 exactly without remainder.

∴ 14 is a factor of 1246.

b.
```
17)6 1 2(36
 − 5 1↓
   1 0 2
 − 1 0 2
       0
```
Since, 17 divides 612 exactly without remainder.

∴ 17 is a factor of 612.

c.
```
25)2 4 5(9
 − 2 2 5
     2 0
```
Since, on dividing 245 by 25, it leaves 20 as remainder.

∴ 25 is not a factor of 245.

d.
```
23)1 0 8 1(47
  − 9 2↓
    1 6 1
  − 1 6 1
        0
```
Since, 23 divides 1081 exactly without remainder.

∴ 23 is a factor of 1081.

e.
```
73)9 4 2 3(129
 − 7 3↓
   2 1 2
  −1 4 6↓
     6 6 3
   − 6 5 7
       0 6
```
Since, on dividing 9425 by 73, it leaves 6 as remainder.

∴ 73 is not a factor of 9423.

f. 86 is a factor of 17802

```
86)1 7 8 0 2(207
 − 1 7 2↓↓
       6 0 2
     − 6 0 2
           0
```
Since, 86 divides 17802 exactly without remainder.

∴ 86 is a factor of 17802.

5. a. 12 and 24

1 × 12 = 12
2 × 6 = 12
3 × 4 = 12

1 × 24 = 24
2 × 12 = 24
3 × 8 = 24
4 × 6 = 24

factors of 12 are
1, 2, 3, 4, 6, 12

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

Common factors= 1, 2, 3, 4, 6, 12
HCF = 12

b. 12 and 24

1 × 24 = 24
2 × 12 = 24
3 × 8 = 24
4 × 6 = 24

1 × 36 = 36
2 × 18 = 36
3 × 12 = 36
4 × 9 = 36
6 × 6 = 36

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

factors of 36 are
1, 2, 3, 4, 6, 9, 12, 18, 36

Common factors= 1, 2, 3, 4, 6, 12
HCF = 12

c. 27 and 36

1 × 27 = 27
3 × 9 = 27

1 × 36 = 36
2 × 18 = 36
3 × 12 = 36
4 × 9 = 36
6 × 6 = 36

factors of 27 are
1, 3, 9, 27

factors of 36 are
1, 2, 3, 4, 9, 12, 18, 36

Common factors= 1, 3, 9
HCF = 9

d. 10 and 50

1 × 10 = 10
2 × 5 = 10

1 × 50 = 50
2 × 25 = 50
5 × 10 = 50

factors of 10 are
1, 2, 5, 10

factors of 36 are
1, 2, 5, 10, 25, 50

Common factors= 2, 5, 10
HCF = 10

e. 56 and 96

1 × 56 = 56
2 × 28 = 56

1 × 96 = 96
2 × 48 = 96

$4 \times 14 = 56$
$7 \times 8 = 56$

factors of 56 are
1, 2, 4, 7, 8, 14, 28, 56

$3 \times 32 = 96$
$4 \times 24 = 96$
$6 \times 16 = 96$
$8 \times 12 = 96$

factors of 96 are
1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 96

Common factors= 1, 2, 4, 8
HCF = 8

f. 20 and 30

$1 \times 20 = 20$
$2 \times 10 = 20$
$4 \times 5 = 20$

factors of 20 are
1, 2, 4, 5, 10, 20

$1 \times 30 = 30$
$2 \times 15 = 30$
$3 \times 10 = 30$
$5 \times 6 = 30$

factors of 30 are
1, 2, 3, 5, 6, 10, 15, 30

Common factors= 1, 2, 5, 10
HCF = 10

5.2

1. a. 0, is a multiple of 12.
   b. No, 8 is not a multiple of 0.
   c. No, 20 is not a multiple of 80 because multiple is either greater than or equal to the given number.
   d. Yes, 72 is a multiple of 12.

```
12 ) 7 2 ( 6
   −7 2
   ----
      0
   ----
```

12 divides 72 exactly
∴ 72 is the multiple of 12

   e. No, 58 is not a multiple of 17.

```
17 ) 5 8 ( 3
   −5 1
   ----
      7
   ----
```

17 does not divides 58 exactly
∴ 58 is not a multiple of 17.

   f. Yes, 95 is a multiple of 19.

```
19 ) 9 5 ( 5
   −9 5
   ----
      0
   ----
```

19 divides 95 exactly
$\therefore$ 95 is the multiple of 19

g. Yes, 132 is a multiple of 132.

$$\begin{array}{r} 132\overline{)132(1} \\ -\,132 \\ \hline 0 \end{array}$$

h. Yes, 3300 is a multiple of 10.

$$\begin{array}{r} 10\overline{)3300(330} \\ -\,30\downarrow \\ \hline 30 \\ -\,30\downarrow \\ \hline 00 \\ -\,0 \\ \hline 00 \\ \hline \end{array}$$

10 divides 3300 exactly
$\therefore$ 10 is a multiple of 3300

2. a. First 6 multiples of 15
= 15, 30, 45, 60, 75, 90

b. Five multiples of 11 = 11, 22, 33, 44, 55, 66

c. Seven multiples of 20 = 20, 40, 60, 80, 100, 120, 140

3.

$$\begin{array}{r} 7\overline{)591(84} \\ -\,56\downarrow \\ \hline 31 \\ -\,28 \\ \hline 3 \end{array}$$

Since 7 does not exactly divides 591
$\therefore$ 591 is not a multiple of 7.

4. a.

$$\begin{array}{r} 6\overline{)192(32} \\ -\,18\downarrow \\ \hline 12 \\ -\,12 \\ \hline 0 \end{array}$$

Since 192 is divisible by 6
$\therefore$ 192 is a multiple of 6.

b.

$$\begin{array}{r} 29\overline{)3016(104} \\ -\,29\downarrow\downarrow \\ \hline 116 \\ -116 \\ \hline 0 \end{array}$$

Since 3016 is divisible by 29

$\therefore$ 3016 is a multiple of 29.

c.

$$\begin{array}{r} 54\overline{)1\,0\,9\,6\,8}(203 \\ -\,1\,0\,8\downarrow\downarrow \\ \hline 1\,6\,8 \\ -\,1\,6\,2 \\ \hline 6 \end{array}$$

Since 10968 is not divisible by 54

$\therefore$ 1098 is not a multiple of 54.

5. a. 8 and 12

Multiples of 8 are 8, 16, 24, 32, 40, 48, 56
Multiples of 12 are 12, 24, 36, 48, 60
Common multiples = 24, 48
LCM = 24

b. 10 and 25

Multiples of 10 are 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
Multiples of 25 are 25, 50, 75, 100
Common multiples = 50, 100
LCM = 50

c. 12 and 15

Multiples of 12 are 12, 24, 36, 48, 60
Multiples of 15 are 15, 30, 45, 60, 75, 90, 105, 120
Common multiples = 60, 120
LCM = 60

d. 24, 36 and 18

Multiples of 24 are 24, 48, 72, 96,120, 144, 168, 192 .....
Multiples of 36 are 36, 72, 108, 144, 180, 216, 252, 288 ....
Multiples of 18 are 18, 36, 54, 72, 90, 108, 126, 144
Common multiples = 72, 144
LCM = 72

e. 20, 30 and 40

Multiples of 20 are 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, ...
Multiples of 30 are 30, 60, 90, 120, 150, 180, 210, 240
Multiples of 40 are 40, 80, 120, 160, 200, 240
Common multiples = 120, 240
LCM = 120

f. 25, 45 and 60

Multiples of 25 are 25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, ... 900
Multiples of 45 are 45, 90, 135, 180, 225, 270, 315, 360, 405, 450, ..., 900

Multiples of 60 are 60, 120, 180, 240, 300, 360, 420, 480, 540, 600, ... 900

Common multiples = 900

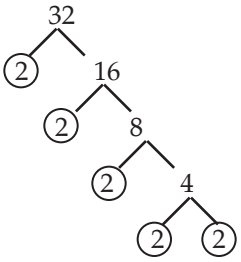
LCM = 900

5.3

1. a. 2 b. 4 c. 9
   d. 3 e. composite f. 1
2. Prime numbers less than 50 are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47
3. Prime number between 30 and 80
   31, 37, 41, 43, 47
4. Prime number between 80 and 100 are
   83, 89, 97
5. Composite numbers between 60 to 90 are
   61, 67, 71, 73, 79, 83, 87, 89

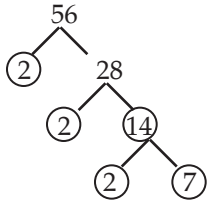
5.4

1.



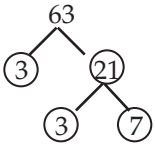
$32 = 2 \times 2 \times 2 \times 2 \times 2$

2.



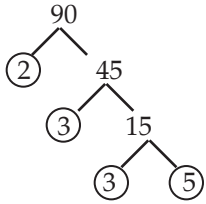
$56 = 2 \times 2 \times 2 \times 7$

3.



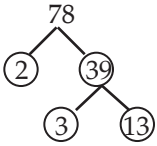
$63 = 7 \times 3 \times 3$

4.



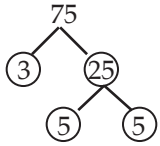
$90 = 5 \times 3 \times 3 \times 2$

5.

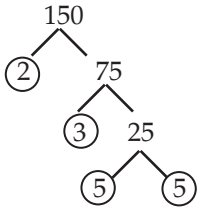


$78 = 2 \times 3 \times 13$

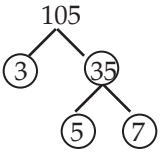
6.



$75 = 3 \times 5 \times 5$

7. 

$150 = 5 \times 5 \times 3 \times 2$

8. 

$105 = 7 \times 5 \times 3$

5.5

1. a), c), d), f), h)
2. a. $3282 = 3 + 2 + 8 + 2 = 15$ — 15 is divisible by 3
   $\therefore$ 3282 is divisible by 3
   b. $4506 = 4 + 5 + 0 + 6 = 15$ — 15 is divisible by 3
   $\therefore$ 4506 is divisible by 3
   c. $83211 = 8 + 3 + 2 + 1 + 1 = 15$ — 15 is divisible by 3
   $\therefore$ 83211 is divisible by 3
   d. $40315 = 4 + 0 + 3 + 1 + 5 = 13$ — 13 is not divisible by 3
   $\therefore$ 40315 is not divisible by 3
   e. $40371 = 4 + 0 + 3 + 7 + 1 = 15$ — 15 is divisible by 3
   $\therefore$ 40371 is divisible by 3
   f. $23456 = 2 + 3 + 4 + 5 + 6 = 20$ — 20 is not divisible by 3
   $\therefore$ 23456 is not divisible by 3
   g. $75102 = 7 + 5 + 1 + 0 + 2 = 15$ — 15 is divisible by 3
   $\therefore$ 75102 is divisible by 3
   h. $301426 = 3 + 0 + 1 + 4 + 2 + 6 = 16$ — 16 is not divisible by 3
   $\therefore$ 301426 is not divisible by 3
3. a. 9999
   It's unit digit is 9
   So, it is not divisible by 2
   Sum of its digits = 9 + 9 + 9 + 9 = 36
   which is divisible by 3
   $\therefore$ 9999 is not divisible by 6
   b. 15326
   It's unit digit is 6
   So, it is divisible by 2
   Sum of its digits = 1 + 5 + 3 + 6 + 2 = 17
   which is not divisible by 3
   $\therefore$ 15326 is not divisible by 6

c. 7848
It's unit digit is 8
So, it is divisible by 2
Sum of its digits = 7 + 8 + 4 + 8 = 27
which is divisible by 3
∴ 7848 is divisible by 6

d. 17076
It's unit digit is 6
So, it is divisible by 2
Sum of its digits = 1 + 7 + 0 + 7 + 6 = 21
which is divisible by 3
∴ 17076 is divisible by 6

e. 19284
It's unit digit is 4
So, it is divisible by 2
Sum of its digits = 1 + 9 + 2 + 8 + 4 = 24
which is divisible by 3
∴ 19284 is divisible by 6

f. 12322
It's unit digit is 2
So, it is divisible by 2
Sum of its digits = 1 + 2 + 3 + 2 + 2 = 10
which is not divisible by 3
∴ 12322 is not divisible by 3

g. 14310
It's unit digit is 0
So, it is divisible by 2
Sum of its digits = 1 + 4 + 3 + 1 + 0 = 9
which is divisible by 3
∴ 14310 is divisible by 6

h. 10758
It's unit digit is 8
So, it is divisible by 2
Sum of its digits = 1 + 0 + 7 + 5 = 13
which is not divisible by 3
∴ 10758 is not divisible by 6

4. a. It's unit digit is 4. So 53914 is not divisible by 5.
b. It's unit digit is 0. So 194260 is divisible by 5.
c. It's unit digit is 8. So 26508 is not divisible by 5.
d. It's unit digit is 2. So 679352 is not divisible by 5.
e. It's unit digit is 5. So 130705 is divisible by 5.
f. It's unit digit is 5. So 123405 is divisible by 5.
g. It's unit digit is 0. So 957180 is divisible by 5.
h. It's unit digit is 6. So 3760106 is not divisible by 5.

5. a. 6 + 3 + 0 + 2 + 7 = 18 Divisible by 9
   b. 2 + 3 + 5 + 4 + 9 = 23 not divisible by 9
   c. 3 + 2 + 4 + 5 + 0 + 1 = 15 not divisible by 9
   d. 5 + 4 + 6 + 3 + 2 + 7 = 27 Divisible by 9
   e. 9 + 3 + 3 + 1 + 1 = 17 not divisible by 9
   f. 5 + 7 + 1 + 2 + 3 = 18 Divisible by 9
   g. 6 + 8 + 9 + 3 + 0 + 1 = 27 Divisible by 9
   h. 2 + 6 + 4 + 5 + 0 + 3 = 20 not divisible by 9
6. a), d), g), h)
7. Even odd
   b, d, e, g, h a, c, f

Revision

1. a. T b. T c. T d. T e. T
   f. F g. F h. F
2. a. 89, 59, 19, 29 b. 47, 7, 17, 37, 67
3. a. 93, 33, 63 b. 21, 51, 81
4. a. 20 b. 21, 35, 49
5. a. No b. No c. Yes d. Yes
6. a. 18 and 24

   1 × 18 = 18 1 × 24 = 24
   2 × 9 = 18 2 × 12 = 24
   3 × 6 = 18 3 × 8 = 24
   4 × 6 = 24

   Factor of 18 Factor of 24
   1, 2, 3, 6, 9, 18 1, 2, 3, 4, 6, 8, 12, 24
   Common factors = 1, 2, 3, 6
   HCF = 6

   b. 20 and 28

   1 × 20 = 20 1 × 28 = 28
   2 × 10 = 20 2 × 14 = 28
   4 × 5 = 20 4 × 7 = 28
   Factor of 20 Factor of 24
   1, 2, 4, 5, 10, 20 1, 2, 4, 7, 14, 28
   Common factors = 1, 2, 4
   HCF = 4

   c. 45 and 75

   1 × 45 = 45 1 × 75 = 75
   3 × 15 = 45 3 × 25 = 75
   5 × 9 = 45 5 × 15 = 75
   Factor of 45 Factor of 75
   1, 3, 5, 9, 15, 45 1, 3, 5, 15, 25, 75
   Common factors = 1, 3, 5, 15

HCF = 15

d. 54 and 81

$1 \times 54 = 54$	$1 \times 81 = 81$
$2 \times 27 = 54$	$3 \times 27 = 81$
$3 \times 18 = 54$	$9 \times 9 = 81$
$6 \times 9 = 54$	
Factor of 54	Factor of 81
1, 2, 3, 6, 9, 18, 27, 54	1, 3, 9, 27, 81

Common factors = 1, 3, 9

HCF = 9

7. a. multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
multiples of 15 = 15, 30, 45, 60, 75, 90, 105
Common multiples = 30, 60
LCM = 30

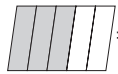
b. multiples of 12 = 12, 24, 36, 48, 60, 72, 84, 96
multiples of 16 = 16, 32, 48, 64, 80, 96
Common multiples = 48, 96
LCM = 48

c. multiples of 20 = 20, 40, 60, 80, 100, 120, 140, 160, 180, 200
multiples of 25 = 25, 50, 75, 100, 125, 150, 175, 200
multiples of 50 = 50, 100, 150, 200, 250, 300, 350, 400
Common multiples = 100, 200
LCM = 100

d. multiples of 2 = 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, ..., 48
multiples of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 60
multiples of 8 = 8, 16, 24, 32, 40, 48
Common multiples = 24, 48
LCM = 24

8. $6 + 3 + 6 = 15$ Not divisible by 9
$1 + 0 + 4 + 3 = 8$ Not divisible by 9
$1 + 9 + 1 = 11$ Not divisible by 9
$3 + 5 + 1 = 9$ Divisible by 9
$1 + 2 + 4 + 1 = 8$ Not divisible by 9
$3 + 7 + 3 + 5 = 18$ Divisible by 9
$2 + 0 + 5 + 2 = 9$ Divisible by 9

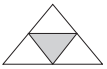
6.1

1. Do it yourself
2. a.  b.  c.  d.  e. 
3. a.  $= \frac{1}{4}$ b.  $= \frac{3}{4}$ c.  $= \frac{3}{5}$

d.  $= \frac{2}{4}$ e.  $= \frac{4}{6}$ f.  $= \frac{3}{4}$

g.  $= \frac{5}{8}$ h.  $= \frac{1}{4}$

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

c.  $= \frac{1}{4}$ d.  $= \frac{1}{4}$

6.2

1. a. $\frac{2}{4} = \frac{4}{8}$ b. $\frac{1}{2} = \frac{3}{6}$ c. $\frac{1}{4} = \frac{2}{8}$ d. $\frac{4}{6} = \frac{6}{9}$

e. $\frac{1}{4} = \frac{2}{8}$ f. $\frac{2}{3} = \frac{4}{6}$

2. a. $\frac{3}{5} \times \frac{4}{4} = \frac{12}{20}$ $\frac{3}{5} \times \frac{5}{5} = \frac{15}{25}$ $\frac{3}{5} \times \frac{6}{6} = \frac{18}{30}$

$\therefore \frac{3}{5} = \frac{6}{10} = \frac{9}{15} = \frac{12}{20} = \frac{15}{25} = \frac{18}{30}$

b. $\frac{2}{9} \times \frac{4}{4} = \frac{8}{36}$ $\frac{2}{9} \times \frac{5}{5} = \frac{10}{45}$ $\frac{2}{9} \times \frac{6}{6} = \frac{12}{54}$

$\therefore \frac{2}{9} = \frac{4}{18} = \frac{6}{27} = \frac{8}{30} = \frac{10}{45} = \frac{12}{54}$

c. $\frac{4}{5} \times \frac{4}{4} = \frac{16}{20}$ $\frac{4}{5} \times \frac{5}{5} = \frac{20}{25}$ $\frac{4}{5} \times \frac{6}{6} = \frac{24}{30}$

$\therefore \frac{4}{5} = \frac{8}{10} = \frac{12}{15} = \frac{16}{20} = \frac{20}{25} = \frac{24}{30}$

d. $\frac{10}{15} \times \frac{4}{4} = \frac{40}{60}$ $\frac{10}{15} \times \frac{5}{5} = \frac{50}{75}$ $\frac{10}{15} \times \frac{6}{6} = \frac{60}{90}$

$\therefore \frac{10}{15} = \frac{20}{30} = \frac{30}{45} = \frac{40}{60} = \frac{50}{75} = \frac{60}{90}$

3. a. $\frac{2}{3} \times \frac{2}{2} = \frac{4}{6}$ $\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$

$\frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$ $\frac{2}{3} \times \frac{5}{5} = \frac{10}{15}$

$\therefore \frac{2}{3} = \frac{4}{6} = \frac{6}{9} = \frac{8}{12} = \frac{10}{15}$

b. $\frac{6}{7} \times \frac{2}{2} = \frac{12}{14}$ $\frac{6}{7} \times \frac{4}{4} = \frac{24}{28}$

$\frac{6}{7} \times \frac{3}{3} = \frac{18}{21}$ $\frac{6}{7} \times \frac{5}{5} = \frac{30}{35}$

$\therefore \frac{6}{7} = \frac{12}{14} = \frac{18}{21} = \frac{24}{28} = \frac{30}{35}$

c. $\frac{7}{9} \times \frac{2}{2} = \frac{14}{18}$ $\frac{7}{9} \times \frac{4}{4} = \frac{28}{36}$

$\frac{7}{9} \times \frac{3}{3} = \frac{21}{27}$ $\frac{7}{9} \times \frac{5}{5} = \frac{35}{45}$

$\therefore \frac{7}{9} = \frac{14}{18} = \frac{21}{27} = \frac{28}{36} = \frac{35}{45}$

d. $\frac{8}{11} \times \frac{2}{2} = \frac{16}{22}$ $\frac{8}{11} \times \frac{4}{4} = \frac{32}{44}$

$\frac{8}{11} \times \frac{3}{3} = \frac{24}{33}$ $\frac{8}{11} \times \frac{5}{5} = \frac{40}{55}$

$\therefore \frac{8}{11} = \frac{16}{22} = \frac{24}{33} = \frac{32}{44} = \frac{40}{55}$

4. a. $\frac{2}{7} \times \frac{3}{3} = \frac{\boxed{6}}{21}$ b. $\frac{5}{8} \times \frac{5}{5} = \frac{\boxed{25}}{40}$ c. $\frac{3}{4} \times \frac{4}{4} = \frac{\boxed{12}}{16}$ d. $\frac{4}{9} \times \frac{8}{8} = \frac{\boxed{32}}{72}$

e. $\frac{3}{4} \times \frac{6}{6} = \frac{18}{\boxed{24}}$ f. $\frac{4}{5} \times \frac{7}{7} = \frac{28}{\boxed{35}}$ g. $\frac{40}{56} \div \frac{8}{8} = \frac{5}{\boxed{7}}$ h. $\frac{28}{42} \div \frac{7}{7} = \frac{4}{\boxed{6}}$

6.3

1. a. $\frac{3}{4}$ b. $\frac{5}{6}$ c. $\frac{7}{8}$ d. $\frac{3}{6}$

2. b. $\frac{1}{3}$ of $15 = \frac{1}{3} \times 15 = 5$ c. $\frac{1}{3}$ of $6 = \frac{1}{3} \times 6 = 2$

d. $\frac{1}{3}$ of $12 = \frac{1}{3} \times 12 = 4$

3. b. $\frac{1}{4}$ of $12 = \frac{1}{4} \times 12 = 3$ c. $\frac{1}{4}$ of $8 = \frac{1}{4} \times 8 = 2$

4. a. $\frac{1}{3} \times 39 = 13$ b. $\frac{1}{4} \times 24 = 6$ c. $\frac{1}{8} \times 24 = 3$ d. $\frac{1}{3} \times 24 = 8$

e. $\frac{1}{6} \times 48 = 8$ f. $\frac{1}{4} \times 64 = 16$

6.4

1. a. $\frac{4}{7} > \frac{2}{7}$ b. $\frac{1}{9} < \frac{5}{9}$ c. $\frac{7}{10} < \frac{9}{10}$ d. $\frac{5}{11} > \frac{3}{11}$

e. $\frac{6}{13} > \frac{4}{13}$ f. $\frac{9}{20} > \frac{6}{20}$ g. $\frac{9}{14} < \frac{13}{14}$ h. $\frac{21}{30} > \frac{8}{30}$

2. a. $\frac{4}{11}, \frac{5}{11}, \frac{7}{11}, \frac{9}{11}$ b. $\frac{1}{10}, \frac{3}{10}, \frac{6}{10}, \frac{7}{10}$ c. $\frac{1}{16}, \frac{5}{16}, \frac{9}{16}, \frac{11}{16}, \frac{13}{16}$

3. a. $\frac{6}{9}, \frac{4}{9}, \frac{3}{9}, \frac{2}{9}, \frac{1}{9}$ b. $\frac{8}{13}, \frac{6}{13}, \frac{4}{13}, \frac{2}{13}, \frac{1}{13}$

c. $\frac{20}{23}, \frac{17}{23}, \frac{10}{23}, \frac{5}{23}, \frac{2}{23}$

6.5

1. a. $\frac{3}{5} > \frac{3}{7}$ b. $\frac{2}{9} < \frac{2}{5}$ c. $\frac{5}{9} > \frac{5}{11}$ d. $\frac{6}{11} < \frac{6}{8}$

e. $\frac{7}{15} < \frac{7}{11}$ f. $\frac{6}{10} > \frac{6}{13}$ g. $\frac{9}{13} > \frac{9}{17}$ h. $\frac{15}{23} < \frac{15}{19}$

2. a. $\frac{2}{9} < \frac{2}{7} < \frac{2}{5} < \frac{2}{3}$ b. $\frac{1}{7} < \frac{1}{5} < \frac{1}{4} < \frac{1}{3} < \frac{1}{2}$

c. $\frac{7}{15} < \frac{7}{13} < \frac{7}{11} < \frac{7}{9} < \frac{7}{8}$

3. a. $\frac{1}{3} > \frac{1}{6} > \frac{1}{9} > \frac{1}{12}$ b. $\frac{4}{7} > \frac{4}{9} > \frac{4}{11} > \frac{4}{13} > \frac{4}{15}$

c. $\frac{2}{3} > \frac{2}{5} > \frac{2}{9} > \frac{2}{11}$

6.6

1. a. $\frac{1}{10}, \frac{3}{10}, \frac{7}{10}$ d. $\frac{7}{15}, \frac{4}{15}, \frac{2}{15}, \frac{5}{15}, \frac{6}{15}$

2. c. $\frac{5}{4}, \frac{7}{8}, \frac{6}{11}, \frac{5}{7}$ d. $\frac{1}{2}, \frac{3}{4}, \frac{5}{6}, \frac{6}{7}, \frac{9}{10}$

3. a. $\frac{2}{7}, \frac{4}{7}, \frac{5}{7}$ b. $\frac{3}{11}, \frac{4}{11}, \frac{8}{11}$ c. $\frac{4}{15}, \frac{7}{15}, \frac{11}{15}$

4. $\frac{2}{3}, \textcircled{\frac{1}{8}}, \textcircled{\frac{1}{7}}, \frac{4}{9}$ 5. $\frac{7}{8}, \frac{4}{7}, \textcircled{\frac{9}{2}}, \textcircled{\frac{5}{3}}, \frac{4}{11}, \frac{9}{15}$

6.7

1. a. $\frac{8}{9}$ b. $\frac{6}{6} = 1$ c. $\frac{7}{8}$ d. $\frac{9}{10}$

2. a. $\frac{6}{6} = 1$ b. $\frac{6}{9}$ c. $\frac{8}{10}$

3. a. $\frac{2}{3}$ b. $\frac{1}{5}$ c. $\frac{5}{9}$ d. $\frac{4}{12}$

e. $\frac{3}{10}$ f. $\frac{5}{11}$ g. $\frac{2}{8}$ h. $\frac{4}{10}$

4. a. $\frac{6}{5} - \frac{2}{5} = \frac{4}{5}$ b. $\frac{6}{7} - \frac{3}{7} = \frac{3}{7}$ c. $\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$

6.8

1. a. (i) $15 \div 4$ b. (i) $2\frac{3}{5}$

2. a. $\frac{4}{3} = 1\frac{1}{3}$ $3\overline{)4}\ 1$, -3, 1 b. $\frac{11}{4} = 2\frac{3}{4}$ $4\overline{)1\ 1}\ 2$, -8, 3

   c. $\frac{7}{5} = 1\frac{2}{5}$ $5\overline{)7}\ 1$, -5, 2 d. $\frac{50}{9} = 5\frac{5}{9}$ $9\overline{)5\ 0}\ 5$, $-4\ 5$, 5

   e. $\frac{68}{11} = 6\frac{2}{11}$ $11\overline{)6\ 8}\ 6$, $-6\ 6$, 2 f. $\frac{74}{15} = 4\frac{14}{15}$ $15\overline{)7\ 4}\ 4$, $-6\ 0$, $1\ 4$

3. a. $1\frac{4}{9} = \frac{9 \times 1 + 4}{9} = \frac{13}{9}$ b. $2\frac{1}{3} = \frac{3 \times 2 + 1}{3} = \frac{7}{3}$

   c. $6\frac{1}{4} = \frac{4 \times 6 + 1}{4} = \frac{25}{4}$

   d. $9\frac{1}{9} = \frac{9 \times 9 + 1}{9} = \frac{82}{9}$ e. $12\frac{3}{7} = \frac{12 \times 7 + 3}{7} = \frac{87}{7}$

   f. $10\frac{1}{10} = \frac{10 \times 10 + 1}{7} = \frac{101}{10}$

Revision

1. a. $\frac{1}{4} \times 28 = 7$ b. $\frac{1}{3} \times 36 = 12$ c. $\frac{1}{11} \times 77 = 7$

2. a. $\frac{48 \div 24}{72 \div 24} = \frac{2}{\boxed{3}}$ a. $\frac{48 \div 8}{72 \div 8} = \frac{\boxed{6}}{9}$ c. $\frac{48 \div 6}{72 \div 6} = \frac{8}{\boxed{12}}$ d. $\frac{48 \div 4}{72 \div 4} = \frac{\boxed{12}}{18}$

3. a. $\frac{2 \times 8}{3 \times 8} = \frac{16}{24}$ b. $\frac{3 \times 6}{4 \times 6} = \frac{18}{24}$ c. $\frac{5 \times 4}{6 \times 4} = \frac{20}{24}$ d. $\frac{7 \times 3}{8 \times 3} = \frac{21}{24}$

   e. $\frac{14 \div 2}{48 \div 2} = \frac{7}{24}$ f. $\frac{15 \div 3}{72 \div 3} = \frac{5}{24}$

4. a. $\frac{2 \times 9}{15 \times 9} = \frac{18}{135}$ b. $\frac{3 \times 6}{4 \times 6} = \frac{18}{24}$ c. $\frac{6 \times 3}{7 \times 3} = \frac{18}{21}$ d. $\frac{9 \times 2}{10 \times 2} = \frac{18}{20}$

   e. $\frac{54 \div 3}{84 \div 3} = \frac{18}{28}$ f. $\frac{72 \div 4}{92 \div 4} = \frac{18}{23}$

5. a. $\frac{\cancel{6}^{3}}{\cancel{10}^{5}} = \frac{3}{5}$ b. $\frac{\cancel{16}^{4^{2}}}{\cancel{24}^{6^{3}}} = \frac{2}{3}$ c. $\frac{\cancel{21}^{7}}{\cancel{24}^{3}}$ $\frac{3}{4} \neq \frac{21}{24}$

   $\frac{\cancel{9}^{3}}{\cancel{15}^{5}} = \frac{3}{5}$ $\frac{16}{24} = \frac{2}{3}$

$\therefore \frac{6}{10} = \frac{9}{15}$

d. $\frac{\cancel{8}^{4}}{\cancel{12}_{6}} = \frac{2}{3}$ $\quad \frac{\cancel{14}^{2}}{\cancel{21}_{3}} = \frac{2}{3}$

$\therefore \frac{8}{12} = \frac{14}{21}$

6. a. $\frac{7}{10} < \frac{9}{10}$ b. $\frac{4}{6} < \frac{11}{6}$ c. $\frac{6}{8} > \frac{6}{11}$ d. $\frac{9}{19} < \frac{9}{10}$

7. a. $\frac{1}{3}, \frac{2}{3}, \frac{4}{3}, \frac{9}{10}, \frac{9}{10}$ b. $\frac{2}{19}, \frac{5}{19}, \frac{11}{19}, \frac{13}{19}, \frac{17}{19}$

c. $\frac{4}{21}, \frac{7}{21}, \frac{8}{21}, \frac{9}{21}, \frac{15}{21}$

8. a. $\frac{9}{10}$ b. $\frac{4}{5}$ c. $\frac{5}{21}$

9. a. $\frac{5}{3} = 1\frac{2}{3}$

$$\begin{array}{r} 3\overline{)5\,(1} \\ -3 \\ \hline 2 \end{array}$$

c. $\frac{11}{5} = 2\frac{1}{5}$

$$\begin{array}{r} 5\overline{)1\,1\,(2} \\ -1\,0 \\ \hline 1 \end{array}$$

d. $\frac{24}{9} = 2\frac{6}{9}$

$$\begin{array}{r} 9\overline{)2\,4\,(2} \\ -1\,8 \\ \hline 6 \end{array}$$

7.1

1. a. $\frac{4}{10}$ b. $\frac{5}{100}$ c. $\frac{3}{5}$ d. 0.7

2. a. 0.6 b. 0.08 c. 0.38 d. 0.40

e. 0.345 f. 0.500 g. 0.016 h. 0.003

3. a. $\frac{7}{10}$ b. $\frac{8}{100}$ c. $\frac{19}{100}$ d. $\frac{10}{1000}$

a. $\frac{61}{1000}$ b. $\frac{409}{1000}$ c. $\frac{856}{1000}$ d. $\frac{911}{1000}$

4. a. Decimal Eight b. Decimal zero eight
c. Three decimal zero one four. d. Fifteen decimal four zero eigtht
e. One hundred twenty six decimal three zero eigtht
f. Fifty decimal five six
g. Five hundred Thirteen decimal nine
h. Two hundred seventeen decimal six zero eight

5.

Fraction	$\frac{74}{1000}$	$\frac{21609}{1000}$	$\frac{495}{100}$	$\frac{823}{100}$	$\frac{9108}{1000}$	$\frac{5766}{1000}$
Decimal	0.074	21.609	4.95	8.23	9.108	5.766

6. a. $6 \longrightarrow \frac{6}{10}$ or 0.6 b. $9 \longrightarrow \frac{9}{1000}$ or 0.009
   c. $2 \longrightarrow 20$ d. $8 \longrightarrow \frac{8}{100}$ or 0.08
   e. $5 \longrightarrow \frac{5}{100}$ or 0.05 f. $5 \longrightarrow 5$
   g. $1 \longrightarrow \frac{1}{10}$ or 0.1 h. $4 \longrightarrow \frac{4}{10000}$ or 0.0004
7. a. 9.123 b. 546.208 c. 306.059 d. 50.203 e. 81.008

Revision

1. a. $\frac{5}{10} + \frac{3}{100} + \frac{8}{1000}$ b. $7 + \frac{4}{10} + \frac{2}{1000}$
   c. $100 + 80 + \frac{5}{100} + \frac{3}{1000}$ d. $15 + \frac{8}{100} + \frac{6}{1000}$
   e. $10 + 5 + \frac{9}{10} + \frac{2}{100} + \frac{4}{1000}$ f. $9 + \frac{3}{100}$
2. a. $3 \longrightarrow \frac{3}{10}$ or 0.3 b. $3 \longrightarrow \frac{3}{100}$ or 0.03
   c. $3 \longrightarrow \frac{3}{1000}$ or 0.003 d. $3 \longrightarrow \frac{3}{10} = 0.3$
   e. $3 \longrightarrow 300$ f. $3 \longrightarrow 30$
3. a. 8.01 b. 19.003 c. 76.375

8.1

1. a. location b. line c. Initial d. lines e. line
   f. line segment, line
2. Do it yourself 3. Do it yourself

8.2

1. a. XY > PQ b. AB < PQ c. AB < CD d. RS = EF
2. Do it yourself 3. Do it yourself

8.3

1. b) d) 2. Do it yourself
3. a. 90° b. 45° c. 120° d. 135°

8.4

1. a. Isosceles as two sides are equal
   b. Scalene as all sides are different

c. Equilateral as all sides are equal

2. a. Right – angled b. Acute – angled
   c. Obtuse – angled
3. a. Isosceles b. Scalene c. Scalene d. Equilateral
4. a. Right – angled b. Acute – angled
   c. Obtuse – angled d. Acute – angled

8.5

1. a. Square b. Quadrilateral c. 4, 4, 4
2. a, d
3. a. Side — XY, YZ, ZX b. ML, LK, KM = sides
   Vertices — X, Y, Z M, L, K = vertices
   c. Sides — AB, BC, CD, DA d. Sides = PQ, QR, RS, PS
   Vertices — A, B, C, D Vertices = P, Q, R, S
4. a. Rectangle b. Rectangle c. Square d. Parallelogram
5. b, f

8.6

1. a. equal b. Chord c. Circumference d. Twice
2. a. OA, ON, OM, OB, OP b. AB, MN c. AM, NB, AB, MN
3. Radius = 12 cm 4. D = 16 cm 5. Do it yourself
   $D = 2 \times R$ $R = 2 \div D = 2 \div 16 = 8$ cm
   $= 2 \times 12 = 24$ cm

Revision

1. b) line 2. b) 8 3. c) length 4. a) 10 mm
5. c) Chord 6. a) 6 7. a) 4

9.1

1. b), c), d), e), g), are symmetrical 2. Do it yourself
3. a. Yes b. No c. No d. No e. No f. No
4. a. 2 b. 1 c. 5

9.2

Do it yourself

9.3

1. a. 9, 11, 13 b. 160, 320, 640 c. E 12 F10 G 8
   d. 105, 110, 115 e. 30, 36, 42 f. 61 73, 85
2. Do it yourself

9.4

1. a. 17 b. 44 c. 300000 d. 39
   e. 54 f. 78 g. 59 h. 10,00,000

Revision

1. Do it yourself 2. Do it yourself 3. A, H, I, M, O, T, U, V, W, X, Y
4. Do it yourself 5. Do it yourself 6. Do it yourself
7. a. 324, 972, 2916 b. 84, 98, 112 c. 25 E, 30 F, 35 G
   d. EV, FU, GT e. 25, 36, 49

10.1

1. a. 5 km = 5 × 1000 m As (1 km = 1000m)
   = 5000 m
   b. 19 km = 19 × 1000 m c. 63 km = 63 × 1000 m
   = 19000 m 63000 m
   d. 308 km= 308 × 1000 m
   = 308000 m
2. 1 m = 10 dm
   a. 7 m = 7×10 m = 70 dm b. 35 m = 35×10 dm = 350 dm
   c. 57 m = 57×10 m = 570 dm b. 400 m = 400×10 dm = 4000 dm
3. 1 m = 100 cm
   a. 9 m = 9×100 cm = 900 cm
   b. 40 m = 40×100 cm = 4000 cm
   c. 84 m = 84×100 cm = 8400 cm
   d. 105 m = 105×100 cm = 10500 cm
4. 1 cm = 10 mm
   a. 75 cm = 75×10 mm = 750 mm
   b. 98 cm = 98×10 mm = 980 mm
   c. 200 cm = 200×10 mm = 2000 mm
   d. 950 cm = 950×10 mm = 9500 mm

10.2

1. a. 7 km 416 m
   = 7 km + 416 m
   (As 1 km = 1000 m)
   = 7×1000 m + 416 m
   = 7000 m + 416 m = 7416 m
   b. 3 km 3 m
   = 3 km + 3 m
   = 3 × 1000 m + 3 m
   = 3000 m + 3 m = 3003 m
   c. 70 km 5 m
   = 70 km + 5 m
   = 70 × 1000 m + 5 m
   = 70, 000 m + 5 m = 70, 005 m
   d. 100 km 10 m
   = 100 km + 10 m
   = 100 × 1000 m + 10 m
   = 100000 m + 10 m
   = 100010 m
2. a. 9 m 9 dm
   = 9 m + 9 dm
   (As 1 m = 10 m)
   = 9×10 dm + 9 dm
   = 90 dm + 9 dm = 99 dm
   b. 30 m 5 dm
   = 30 m + 5 dm
   = (As 1 m = 10 m)
   = 30×10 dm + 5 dm
   = 300 dm + 5 dm = 305 dm

c. 303 m 3 dm
= 303 m + 3 dm
(As 1 m = 10 m)
= 303×10 dm + 3 dm
= 3030 dm + 3 dm = 3033 dm

3. a. 9 m 40 cm = 9 m + 40 cm
(As 1 m = 100 cm)
= 9 × 100 cm + 40 cm
= 900 cm + 40 cm = 940 cm

b. 63 m 75 cm = 63 m + 75 cm
(As 1 m = 100 cm)
= 63 × 100 cm + 75 cm
= 6300 cm + 75 cm = 6375 cm

c. 50 m 5 cm = 50 m + 5 cm
(As 1 m = 100 cm)
= 50 × 100 cm + 5 cm
= 5000 cm + 5 cm = 5005 cm

d. 1 m 1 cm = 1 m + 1 cm
(As 1 m = 100 cm)
= 1 × 100 cm + 1 cm
= 100 cm + 1 cm = 101 cm

4. a. 5 cm 5 mm
(As 1 cm = 10 mm)
= 5 × 10 mm + 5 mm
= 50 mm + 5 mm = 55 mm

b. 64 cm 8 mm
(As 1 cm = 10 mm)
= 64 × 10 mm + 8 mm
= 640 mm + 8 mm = 648 mm

c. 70 cm 1 mm
(As 1 cm = 10 mm)
= 70 × 10 mm + 1 mm
= 700 mm + 1 mm = 701 mm

d. 93 cm 5 mm
(As 1 cm = 10 mm)
= 93 × 10 mm + 5 mm
= 930 mm + 5 mm = 935 mm

5. a. 6 km 8 hm 8 dam 7 m
= 6 km + 8 hm + 8 dam + 7 m
= (6×1000) km + (8 × 100) hm + (8 × 10) dam + 7 m
= 6000 km + 800 hm + 80 dam + 7 m
= 6887 m

b. 18 km 6 hm 3 dam 5 m
= 18 km + 6 hm + 3 dam + 5 m
= (18×1000) km + (6 × 100)hm + (3 × 10) dam + 5 m
= 18000 lm + 600 hm + 30 dam + 5 m
= 18635 m

c. 9 km 9 hm 9 dam 9 m
= 9 km + 9 hm + 9 dam + 9 m
= (9×1000) km + (9 × 100) hm + (9 × 10) dam + 9 m
= 9000 km + 900 hm + 90 dam + 9 m
= 9999 m

d. 1 km 1 hm 1 dam 1 m
= 1 km + 1 hm + 1 dam + 1 m
= (1×1000) km + (1 × 100) hm + (1 × 10) dam + 1 m
= 1000 km + 100 hm + 10 dam + 1 m
= 1111 m

10.3

1. a. 20 mm = (20 ÷ 10) cm = 2 cm
   b. 45 mm
   = 40 mm + 5 mm
   (40÷10) cm + 5 mm = 4 cm 5 mm
   c. 70 mm = (70 ÷ 10) cm = 7 cm
   d. 99 mm = 90 mm + 9 mm
   = (90 ÷ 10) cm + 9 mm
   = 9 cm + 9 mm = 9cm 9mm
2. a. 300 cm = (300 ÷ 100) m = 3 m
   b. 800 cm = (800 ÷ 100) m = 8 m
   c. 620 cm = 600 cm + 20 cm
   = (600 ÷ 100) m + 20 cm
   = 6 m + 20 cm = 6 m 20 cm
   d. 205 cm = 200 cm + 5 cm
   = (200 ÷ 100) m + 5 cm
   = 2 m + 5 cm = 2 m 5 cm
   e. 7560 cm = 7500 cm + 60 cm
   = (75 ÷ 100) m + 60 cm
   = 75 m + 60 cm = 75 m 60 cm
3. a. 4000 m = (4000 ÷ 1000) km = 4 km
   b. 11000 m = (11000 ÷ 1000) km = 11 km
   c. 7800 m = (7800 ÷ 1000) km = 78 km
   d. 5206 m = 5000 m + 206 m
   = (5000 ÷ 1000) km + 206 m
   = 5 km + 206 m
   = 5 km 206 m
   e. 8080 m = 8000 m + 80 m
   = (8000 ÷ 1000) km + 80 m
   = 8 km + 80 m
   = 8 km 80 m
4. 6480 mm = (6480 ÷ 10) cm = 648 cm
   = 6000 cm + 48 cm
   = (6000 ÷ 1000) m = 48 cm
   = 6 m + 48 cm = 6 m 48 cm

10.4

1. a. 7 kg = 7 × 1000 g = 7000 g
   b. 43 kg = 43 × 1000 g = 43000g
   c. 308 kg = 308 × 1000 g = 308000 g
   d. 810 kg = 810 × 1000 g = 810000 g
2. a. 2 kg 125 g = 2 kg + 125 g
   (As 1 kg = 1000 g)
   = 2 × 1000 g + 125 g = 2000 g + 125 g = 2125 g

b. 12 kg 60 g = 12 kg + 60 g
(As 1 kg = 1000 g)
= 12 × 1000 g + 60 g = 12000 g + 60 g = 12060 g

c. 20 kg 5 g = 20 kg + 5 g
(As 1 kg = 1000 g)
= 20 × 1000 g + 5 g = 20000 g + 5 g = 20005 g

d. 95 kg 350 g = 95 kg + 350 g
(As 1 kg = 1000 g)
= 95 × 1000 g + 350 g = 95000 g + 350 g = 95350 g

3. a. 8 g = 8 × 1000 mg = 8000 mg
b. 53 g = 53 × 1000 mg = 53000 mg
c. 200 g = 200 × 1000 mg = 200000 mg
d. 465 g = 465 × 1000 mg = 465000 mg

4. a. 6 g 260 mg = 6 g + 260 mg
= 6 × 1000 mg + 260 mg
= 6000 mg + 260 mg = 6260 mg

b. 15 g 15 mg = 15 g + 15 mg
= 15 × 1000 mg + 15 mg
= 15000 mg + 15 mg = 15015 mg

c. 5 g 8 mg = 5 g + 8 mg
= 5 × 1000 mg + 8 mg
= 5000 mg + 8 mg = 5008 mg

d. 1 g 1 mg = 1 g + 1 mg
= 1 × 1000 mg + 1 mg
= 1000 mg + 1 mg = 1001 mg

e. 10 g 10 mg = 10 g + 10 mg
= 10 × 1000 mg + 10 mg
= 10000 mg + 10 mg = 10010 mg

f. 100 g 50 mg = 100 g + 50 mg
= 100 × 1000 mg + 50 mg
= 100000 mg + 50 mg = 100050 mg

5. a. 4 kg 3 hg 5 dag 6 g
= 4 × 1000 g + 3 × 100 g + 5 × 10 g + 6 g
= 4000 g + 300 g + 50 g + 6 g
= 4356 g

b. 8 kg 4 hg 6 dag 3 g
= 8 × 1000 g + 4 × 100 g + 6 × 10 g + 3 g
= 8000 g + 400 g + 60 g + 3 g
= 8463 g

c. 1 kg 1 hg 1 dag 1 g
= 1 × 1000 g + 1 × 100 g + 1 × 10 g + 1 g
= 1000 g + 100 g + 10 g + 1 g
= 1111 g

d. 20 kg 20 hg 20 dag 20 g
= 20 × 1000 g + 20 × 100 g + 20 × 10 g + 20 g
= 20000 g + 2000 g + 200 g + 20 g
= 2022 g

10.5

1. a. 2 kg 80 g b. 9 kg 400 g c. 6 kg 20 g d. 8 kg 80 g
2. a. (4000 ÷ 1000) kg = 4 kg b. (8000 ÷ 1000) kg = 8 kg
   c. (32000 ÷ 1000) kg = 32 kg d. (25000 ÷ 1000) kg = 25 kg
3. a. 6300 g = 6000 g + 300 g
   = (6000 ÷ 1000) kg + 300 g
   = 6 kg + 300 g = 6 kg 300 g
   b. 2460 g = 2000 g + 460 g
   = (2000 ÷ 1000) kg + 460 g
   = 2 kg + 460 g = 2 kg 460 g
   c. 7508 g = 7000 g + 508 g
   = (7000 ÷ 1000) kg + 508 g
   = 7 kg + 508 g = 7 kg 508 g
   d. 4065 g = 4000 g + 65 g
   = (4000 ÷ 1000) kg + 65 g
   = 4 kg + 65 g = 4 kg 65 g
   e. 1006 g = 1000 g + 6 g
   = (1000 ÷ 1000) kg + 6 g
   = 1 kg + 6 g = 1 kg 6 g
   f. 9009 g = 9000 g + 9 g
   = (9000 ÷ 1000) kg + 9 g
   = 9 kg + 9 g = 9 kg 9 g
4. a. 4805 mg = 4000 mg + 805 mg
   = (4000 ÷ 1000) g + 805 mg
   = 4 g + 805 mg = 4 g 805 mg
   b. 7468 mg = 7000 mg + 468 mg
   = (7000 ÷ 1000) g + 468 mg
   = 7 g + 468 mg = 7 g 468 mg
   c. 5550 mg = 5000 mg + 550 mg
   = (5000 ÷ 1000) g + 550 mg
   = 5 g + 550 mg = 5 g 550 mg
   d. 53960 mg = 53000 mg + 960 mg
   = (53000 ÷ 1000) g + 960 mg
   = 53 g + 960 mg = 53 g 960 mg
   e. 73063 mg = 73000 mg + 63 mg
   = (73000 ÷ 1000) g + 63 mg
   = 73 g + 63 mg = 73 g 63 mg
   f. 85010 mg = 85010 mg + 10 mg
   = (85000 ÷ 1000) g + 10 mg

= 85 g + 10 mg = 85 g 10 mg

10.6

1. a. 5 *kl* = 5 × 1000 *l* = 5000 *l* b. 60 *kl* = 60 × 1000 *l* = 60,000 *l*
   c. 160 *kl* = 160 × 1000 *l* = 160000 *l*
2. a. 5 k*l* 350 *l* = 5 k*l* + 350 *l*
   = 5 × 1000 *l* + 350 *l*
   = 5000 *l* + 350 *l*
   = 5350 *l*
   b. 33 k*l* 60 *l* = 33 k*l* + 60 *l*
   = 33 × 1000 *l* + 60 *l*
   = 33000 *l* + 60 *l*
   = 33060 *l*
   c. 2 k*l* 20 *l* = 2 k*l* + 20 *l*
   = 2 × 1000 *l* + 20 *l*
   = 2000 *l* + 20 *l*
   = 2020 *l*
   d. 104 k*l* 8 *l* = 104 k*l* + 8 *l*
   = 104 × 1000 *l* + 8 *l*
   = 104000 *l* + 8 *l*
   = 104008 *l*
3. a. 8 *l* = 8 × 1000 m*l* + 8000 m*l*
   b. 25 *l* = 25 × 1000 m*l* + 25000 m*l*
   c. 70 *l* = 70 × 1000 m*l* + 70000 m*l*
   d. 163 *l* = 163 × 1000 m*l* + 163000 m*l*
4. a. 9 *l* 250 m*l* = 9 *l* + 250 m*l*
   = 9 × 1000 m*l* + 250 m*l*
   = 9000 m*l* + 250 m*l*
   = 9250 m*l*
   b. 40 *l* 40 m*l* = 40 *l* + 40 *l*
   = 40 × 1000 m*l* + 40 m*l*
   = 40000 m*l* + 40 m*l*
   = 40040 m*l*
   c. 106 *l* 680 m*l* = 106 *l* + 680 m*l*
   = 106 × 1000 m*l* + 680 m*l*
   = 106000 m*l* + 680 m*l*
   = 106680 m*l*
   d. 24 *l* 6 m*l* = 24 *l* + 6 m*l*
   = 24 × 1000 m*l* + 6 m*l*
   = 24000 m*l* + 6 m*l*
   = 24006 m*l*
   e. 3 *l* 3 m*l* = 3 *l* + 3 m*l*
   = 3 × 1000 m*l* + 3 m*l*
   = 3000 m*l* + 3 m*l*

= 3003 m*l*

5. a. 8 k*l* 6 h*l* 4 da*l* 5 *l*
   = 8 × 1000 *l* + 6 × 100 *l* + 4 × 10 *l* + 5 *l*
   = 8000 *l* + 600 *l* + 40 *l* + 5 *l*
   = 8645 *l*
   b. 10 k*l* 8 h*l* 5 da*l* 9 *l*
   = 10 × 1000 *l* + 8 × 100 *l* + 5 × 10 *l* + 9 *l*
   = 10000 *l* + 800 *l* + 50 *l* + 9 *l*
   = 10859 *l*
   c. 1 k*l* 2 h*l* 3 da*l* 4 *l*
   = 1 × 1000 *l* + 2 × 100 *l* + 3 × 10 *l* + 4 *l*
   = 1000 *l* + 200 *l* + 30 *l* + 4 *l*
   = 1234 *l*
   d. 9 k*l* 7 h*l* 8 da*l* 6 *l*
   = 9 × 1000 *l* + 7 × 100 *l* + 8 × 10 *l* + 6 *l*
   = 9000 *l* + 700 *l* + 80 *l* + 6 *l*
   = 9786 *l*

10.7

1. a. (3000 ÷ 1000) = 3 *l* b. (9000 ÷ 1000) = 9 *l*
   c. (18000 ÷ 1000) = 18 *l* d. (6000 ÷ 1000) = 6 *l*
2. a. 2 *l* 800 m*l* b. 5 *l* 200 m*l* c. 6 *l* 6 m*l* d. 9 *l* 80 m*l*
3. a. 9090 *l* = 9000 *l* + 90 *l*
   = (9000 ÷ 1000) k*l* + 90 *l*
   = 9 k*l* + 90 *l* = 9 k*l* 90 *l*
   b. 6600 *l* = 6000 *l* + 600 *l*
   = (6000 ÷ 1000) k*l* + 600 *l*
   = 6 k*l* + 600 *l* = 6 k*l* 600 *l*
   c. 9000 *l* = (9000 ÷ 1000) k*l* = 9 k*l*
   d. 3080 *l* = 3000 *l* + 80 *l*
   = (3000 ÷ 1000) k*l* + 80 *l*
   = 3 k*l* + 80 *l* = 3 k*l* 80 *l*
   e. 2005 *l* = 2000 *l* + 5 *l*
   = (2000 ÷ 1000) k*l* + 5 *l*
   = 2 k*l* + 5 *l* = 2 k*l* 5 *l*
   f. 5730 *l* = 5000 *l* + 730 *l*
   = (5000 ÷ 1000) k*l* + 730 *l*
   = 5 k*l* + 730 *l* = 5 k*l* 730 *l*
4. a. (4000 ÷ 1000) *l* = 4 *l*
   b. 5260 m*l* = 5000 m*l* + 260 m*l*
   = (5000 ÷ 1000) *l* + 260 m*l*
   = 5 *l* + 260 m*l*
   = 5 *l* 260 m*l*
   c. 8675 m*l* = 8000 m*l* + 675 m*l*

= (8000 ÷ 1000) *l* + 675 m*l*
= 8 *l* + 675 m*l*
= 8 *l* 675 m*l*

d. 7070 m*l* = 7000 m*l* + 70 m*l*
= (7000 ÷ 1000) *l* + 70 m*l*
= 7 *l* + 70 m*l*
= 7 *l* 70 m*l*

e. 7005 m*l* = 7000 m*l* + 5 m*l*
= (7000 ÷ 1000) *l* + 5 m*l*
= 7 *l* + 5 m*l*
= 7 *l* 5 m*l*

f. 10010 m*l* = 10000 m*l* + 10 m*l*
= (10000 ÷ 1000) *l* + 10 m*l*
= 10 *l* + 10 m*l*
= 10 *l* 10 m*l*

10.8

1. a.

	m	cm
	1 ① 9	3 ① 6
+	6	5 4
	2 5	9 0

b.

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

c.

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

d.

	km	m
	6 ①	2 ① 3 ① 5
+	5	8 7 5
	1 2	1 1 0

e.

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

2. a.

	m	cm
	3 ~~7~~ ⑥	⑫ ~~2~~ 0
−	2 5	6 0
	1 1	6 0

b.

	m	cm
	4 ~~0~~ ⑨	⑫ ~~3~~ ~~7~~ ⑰
−	3 0	5 9
	9	7 8

c.

	km	m
	7 ⑥ ~~5~~ ⑭	⑫ ~~3~~ ~~0~~ ⑩ 5
−	5 7	8 2 5
	1 7	4 8 0

d.

	km	m
	~~4~~ ③ ~~4~~ ⑬	⑨ ~~0~~ ~~7~~ ⑰ 5
−	2 8	2 8 0
	1 5	7 9 5

3. a.

	kg		g		
	1	3	$2^{\textcircled{1}}$	$8^{\textcircled{1}}$	5
+	1	6	5	3	5
	2	9	8	2	0

b.

	kg		g		
	1	$0^{\textcircled{1}}$	$3^{\textcircled{2}}$	$7^{\textcircled{1}}$	5
+		8	2	8	5
		6	7	8	0
	2	5	4	4	0

c.

	g			mg		
	$3^{\textcircled{1}}$	4	$0^{\textcircled{1}}$	$8^{\textcircled{1}}$	6	0
+	1	6	5	4	4	0
	5	0	6	3	0	0

d.

	g			mg		
	$7^{\textcircled{1}}$	$9^{\textcircled{1}}$	5	7	$0^{\textcircled{1}}$	5
+	2	4	5	0	8	5
1	0	4	0	7	9	0

4. a.

	km		m		
	3	$\cancel{0}^{\textcircled{9}}$	$\cancel{4}^{\textcircled{13}}$	$\cancel{4}^{\textcircled{14}}$	0
−	2	0	8	6	0
		9	5	8	0

b.

	km		m		
	$\cancel{2}^{\textcircled{1}}$	$\cancel{2}^{\textcircled{11}}$	$\cancel{3}^{\textcircled{12}}$	$\cancel{6}^{\textcircled{15}}$	$\cancel{0}^{\textcircled{10}}$
−		8	6	7	5
	1	3	6	8	5

c.

	km		m		
	$\cancel{6}^{\textcircled{5}}$	$\cancel{0}^{\textcircled{9}}$	$\cancel{0}^{\textcircled{9}}$	$\cancel{4}^{\textcircled{13}}$	$\cancel{0}^{\textcircled{10}}$
−	1	9	3	8	7
	4	0	6	5	3

d. 1000 kg − 200 kg = 800 kg

5. a.

	l		m*l*		
	$2^{\textcircled{1}}$	5	6	2	5
+		9	3	6	0
	3	4	9	8	5

b.

	l		m*l*		
	3	$3^{\textcircled{1}}$	$8^{\textcircled{1}}$	$6^{\textcircled{1}}$	5
+	2	1	3	8	5
	5	5	2	5	0

c.

	l		m*l*		
	$3^{\textcircled{1}}$	$6^{\textcircled{1}}$	$0^{\textcircled{1}}$	7	0
+	2	4	9	3	0
	6	1	0	0	0

d.

	l		m*l*		
	3	$0^{\textcircled{1}}$	$2^{\textcircled{1}}$	$8^{\textcircled{1}}$	6
+	2	5	7	1	4
	5	6	0	0	0

e.

	l		m*l*		
		$7^{\textcircled{1}}$	$0^{\textcircled{1}}$	$6^{\textcircled{1}}$	5
+	7		9	8	5
	1	5	0	5	0

6. a.

	l		m*l*		
	1	8	5	8	0
−		8	4	3	0
	1	0	1	5	0

b.

	l		m*l*			
	3	$\cancel{0}^{\textcircled{9}}$	$\cancel{0}^{\textcircled{9}}$	$\cancel{0}^{\textcircled{9}}$	$\cancel{0}^{\textcircled{10}}$	
−	2	4	1	3	5	
	0	5	8	6	5	

c.

	km		m		
	3	8⑦	0⑨	9⑧	0⑩
−	3	0	2	8	5
		7	7	0	5

d.

	l		m*l*		
	1	8	0⑨	6⑮	0⑩
−	1	7	9	8	5
		1	0	7	5

10.9

1. Distance travelled by bus = 7 km 60 m
   Distance travelled by auto = 1 km 750 m
   Total distance = 7 km 60 m + 1 km 750

	km		m		
		7	0①	6	0
+		1	7	5	0
		8	8	1	0

   Hence, her school is 8 km 810 m from home.

2. Total roll of electric wire = 125 m
   Length of wire piece cut = 17 m 65 cm
   Length of wire piece left = 125 m – 17 m 65 cm

	km		m	
1	2①⑭	5	0⑨	0⑩
−	1	7	6	5
1	0	7	3	5

   Hence, length of wire left is 107m 35 cm.

3. Quantity of milk in bucket = 15 *l* 725 m*l*
   Quantity of milk in another bucket = 5 *l* 685 m*l*
   Total quantity in 2 buckets = 15 *l* 725 m*l* + 5 *l* 685 m*l*

	l		m*l*		
	1①	5①	7①	2①	5
+		5	6	8	5
	2	1	4	1	0

   Hence, quantity of milk in 2 buckets is 21 *l* 410 m*l*.

4. Quantity of milk sold in first day = 66 *l* 750 m*l*
   Quantity of milk sold in second day = 77 *l* 650 m*l*
   Quantity of milk sold in third day = 62 *l* 050 m*l*
   Total quantity of milk during 3 days = 66 *l* 750 m*l* +77 *l* 650 m*l* + 62 *l* 050 m*l*

	l		m*l*		
	6	6①	7①	5	0
	7	7	6	5	0
+	6	2	0	5	0
	2	0	6	4	5	0

Hence, 206 *l* 450 m*l* is the total sale of milk during 3 days

5. Total sack of rice = 16 kg
Quantity of rice consumed = 8 kg 50 g
Quantity of rice left = 16 kg – 8 kg 50 g

kg		g		
1	~~6~~ ⑤	~~0~~ ⑨	~~0~~ ⑩	~~0~~
– 8		0	5	0
7		9	5	0

Hence, quantity of rice left is 7 kg 950 g

Revision

1. a. 15000 m b. 360 dm c. 15000 cm d. 2000 mm
e. 990 mm f. 4700 mm g. 9800 m h. 600 m
i. 55 mm
2. a. 5000 g b. 110000 g c. 24010 g d. 205300 g
e. 10070 g f. 70070 g g. 450005 mg
3. a. 55000 m*l* b. 700000 m*l* c. 55005 m*l* d. 90090 m*l*
e. 400000 *l* f. 30030 *l*
4. a. 1g 208mg b. 5 *l* 372 *ml* c. 2 km 56m d. 6 km 60 dam
e. 4 m 20 dam f. 6 kg 66 g
5. a.

kg		g		mg		
	6 ①	6 ①	2 ①	5 ①	7 ① 7 ①	5
+ 7		3	8	5	6	4 5
1 4		0	1	1	4	2 0

b.

m		cm		mm
4 ①	8 ①	8 ①	8 ①	9
+ 3	4	2	4	6
8	3	1	3	5

c.

km		m		cm	
2	6	~~7~~ ⑥	~~6~~ ⑮	~~4~~ ⑬	~~3~~ ⑬ 9
– 1	6	3	8	8	8 3
1 0		3	7	5	5 6

d.

k*l*		*l*		m*l*	
~~1~~	~~0~~ ⑨	~~3~~ ⑫	~~8~~ ⑰	~~1~~ ⑪	~~8~~ ⑦ ~~6~~ ⑯ 5
– 7		6	9	6	4 8 5
2		6	8	5	3 8 0

6. Length of Pinkey's crayon = 7 cm 2 mm
Length of Sony's crayon = 4 cm 7 mm
Pinkey's crayon longer by = 7 cm 2 mm – 4 cm 7 mm

cm		mm	
~~7~~ ⑥		~~2~~ ⑫	
– 4		7	
2		5	

Hence Pinkey's crayon is longer by 2 cm 5 mm

7. Total distance b/w two cities = 602 km
Distance travelled by train = 456 km 500 m
Distance travelled by car = 602 km – 456 km 500 m

	km			m		
	~~6~~ ⑤	~~0~~ ⑨	2 ⑪	~~0~~ ⑩	0	0
−	4	5	6	5	0	0
	1	4	5	5	0	0

Hence distance travelled by car is 145 km 500 m.

8. Total quantity of kerosene in drum = 18 *l* 675 m*l*
   Actual quantity of kerosene in drum = 13 *l* 785 m*l*
   Quantity require to fill the capacity = 18 *l* 675 m*l* – 13 *l* 785 m*l*

	l		m*l*		
	1	~~8~~ ⑦	~~6~~ ⑮	~~7~~ ⑰	5
−	1	3	7	8	5
		4	8	9	0

Hence 4 *l* 890 m*l* of kerosene is required to fill the drum.

11.1

1. a. iii) four b. iv) square
   c. Perimeter of square = 4 × side = 4 × 4 = 16 cm
   d. iii) Perimetr of triangle = 5 cm + 3 cm + 1 cm = 9 cm
2. a. Perimeter = 4 cm + 6 cm + 7 cm + 3 cm + 7 cm = 27 cm
   b. Perimeter = 6 cm + 7 cm + 5 cm + 3 cm + 8 cm = 29 cm
   c. Perimeter = 2 cm + 10 cm + 2 cm + 3 cm + 5 cm + 1 cm + 5 cm + 3 cm = 31 cm
   d. Perimeter = 3 cm + 5 cm + 7 cm + 5 cm + 3 cm + 11 cm + 3 cm + 5 cm + 7 cm + 5 cm + 3 cm + 11 cm = 68 cm
3. a. Perimeter of triangle = 10 cm + 18 cm + 24 cm = 52 cm
   b. Perimeter of triangle = 21 cm + 35 cm + 68 cm = 124 cm
   c. Perimeter = 8 m 54 cm + 4 m 42 cm + 12 m 44 cm

	m		cm	
		8 ①	5 ①	4
		4	4	2
	①			
+	1	2	4	4
	2	5	4	0

4. Perimeter of triangle = 35 cm + 35 cm + 36 cm = 106 cm
5. Perimeter = 3 × 16 = 48 cm
6. a. *l* = 26 cm b = 34 cm
   Perimeter = 2 (l + b)
   = 2 (26 + 34)
   = 2 × 60
   = 120 cm

b. l = 15 cm b = 6 cm
Perimeter = 2 (l + b)
= 2 (15 + 6)
= 2 × 21
= 42 cm

c. l = 38 cm b = 29 cm
Perimeter = 2 (l + b)
= 2 (38 + 29)
= 2 × 67
= 134 cm

d. l = 18 cm b = 12 m 15 cm
Perimeter = 2 (l + b)
= 2 (18 m + 12 m 15 cm)
= 2 × (30 m 15 cm)
= 60 m 30 cm

11.2

1. a. 12 sq. cm b. 6 sq. cm c. 16 sq. cm d. 15 sq. cm
   e. 4 sq. cm f. 16 sq. cm g. 10 sq. cm h. 5 sq. cm
2. a. Full squares = 5
   Half squares = 20
   Area = 5 + 10 = 15 sq. cm

   a. Full squares = 8
   Half squares = 16
   Area = 8 + 8 = 16 sq. cm

11.3

1. a. side = 3 cm b. l = 6 cm b = 3 cm c. side = 4 cm
   d. l = 5 cm b = 3 cm
2. a. Area = L × b
   = 20 × 16 = 320 sq. cm

   b. Area = L × b
   = 24 × 16 = 384 sq. cm

   c. Area = L × b
   = 20 × 24 = 480 sq. cm

   d. Area = side × side
   = 20 × 20 = 400 sq. cm
3. 1. l = 20 cm b = 15 cm
   P = 2 (l + b)
   = 2 (20 + 15)
   = 2 × 35 = 70 cm
   Area = l × b = 20 × 15 = 300 sq. cm
   2. Side = 5 cm
   Perimeter = 4 × side = 4 × 5 = 20 cm
   Area = side × side = 5 × 5 = 25 sq. cm
   3. Side = 15 cm
   P = 4 × side = 4 × 15 = 60 cm
   Area = side × side = 15 × 15 = 225 sq. cm
   4. l = 2 cm b = 1 m
   P = 2 (l + b) = 2 (2 + 1) = 2 × 3 = 6 cm
   Area = l × b = 2 × 1 = 2 sq. cm

11.4

1. a. iii) side^2
   b. l = 15 m b = 6 m
   Area = l × b = 15 × 6 = 90 m^2
2. a. l = 5 cm b = 3 cm — Area = l × b = 5 × 3 = 15 cm^2
   b. l = 12 cm b = 9 cm — Area = l × b = 12 × 9 = 108 cm^2
   c. l = 9 cm b = 5 cm — Area = l × b = 9 × 5 = 45 cm^2
   d. l = 1 cm b = 15 cm — Area = l × b = 1 × 15 = 15 cm^2
   e. l = 22 cm b = 11 cm — Area = l × b = 22 × 11 = 242 cm^2
3. a. side = 7 cm — Area of square = side × side = 7 × 7 = 49 cm^2
   b. side = 10 cm — Area of square = side × side = 10 × 10 = 100 cm^2
   c. side = 15 cm — Area of square = side × side = 15 × 15 = 225 cm^2
   d. side = 23 cm — Area of square = side × side = 23 × 23 = 529 cm^2
4. l = 8 m b = 5 m — Area = l × b = 8 × 5 = 40 m^2
5. side of handkerchief = 18 cm
   Area of handkerchief = side × side = 18 × 18 = 324 cm^2
6. l of playground = 10 m b = 8 m
   Area of playground = 10 × 8 = 80 m^2
5. a. sq. unit b. side × side c. Breadth d. 1 cm^2 e. Area

Revision

1. P = 4 × side
   144 = 4 × side
   side = 144 ÷ 4 = 36 cm
2. a. Perimeter of triangle = sum of 3 sides
   39 m = 12 m + 14 m + 3rd side
   39 m = 26 m + 3rd side
   39 m – 26 m = 3 rd side
   13 m = 3rd side
3. a. Length of playground = 250 m
   Breadth of playground = 20 m
   Perimeter of playground = 2 (l + b)
   = 2 (250 + 20)
   = 2 × 270
   = 540 m
   Length of wire required to fence the playground = Perimeter = 540 m
4. Perimeter of picture = 2 (l + b)
   = 2 (80 + 35)

= 2 × 115
= 230 m

Length of wood required to frame
a picture = Perimeter of picture = 230 m = 2 m 30 cm

5. Perimeter of hexagon = 6 × side
24 = 6 × side
24 ÷ 6 = side
side = 4 cm

6. a. Perimeter of square = 184 cm
4 × side = Perimeter
4 × side = 184
side = 184 ÷ 4 = 46 cm

b. Perimeter of sqaure = 4 × side
= 4 × 75
= 300 m

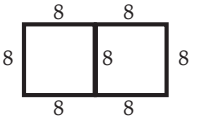
c. Perimeter of square = 256 m
4 × side = 256
side = 256 ÷ 4 = 64 cm

d. Perimeter of rectangle = 210 cm B = 60 m
= 2 (l + b) = 210
= 2 (l + 60) = 210
l + 60 = 210 ÷ 2
l = 105 – 60 = 35 cm

e. Perimeter of rectangle = 62cm L = 18 cm
= 2 (l + b) = 62
= 2 (18 + b) = 62
18 + b = 62 ÷ 2 = 31
b = 31 – 18 = 13 cm

f. Perimeter of rectangle = 156 cm Breadth = 55 cm
= 2 (l + b) = 156
= 2 (l + 55) = 156
l + 55 = 156 ÷ 2
l + 55 = 78
l = 78 – 55 = 23 m

7. b. side = 8 cm
Perimeter of two square = sum of all side



= 8 + 8 + 8 + 8 +8 +8 + 8 = 56 cm

12.1

1. b. 12 minutes to 2 c. 31 minutes to 7 d. 29 minutes to 5
e. 43 minutes to 10 f. 10 minutes to 1

2. a. 8 : 04, 4 minutes past 8
   b. 7 : 20, 20 minutes past 7
   c. 11 : 30, 30 minutes past 11/ half past 11
3. Do it yourself

12.2

1. a. 7 : 42 a.m and 8 : 39 a.m

		hrs.	Mins
7 : 42 ⟶ 8 : 00			18
8 : 00 ⟶ 8 : 39	+		39
			57

∴ 57 minutes

b. 12 : 00 p.m. and 8 a.m.?

	hrs.	Mins
12 : 00 ⟶ 8	8	

∴ 8 hrs

c. 2 : 37 p.m. and 10 : 42 p.m.

		hrs.	Mins
2 : 37 p.m. ⟶ 3 : 00 p.m.			23
3 : 00 p.m. ⟶ 10 : 00 p.m.		7	
10 : 00 p.m. ⟶10 : 42 p.m.	+		42
		$7^{①}$	65
			(– 60)
		8 hrs.	5 mins

∴ 8 hrs. 5 mins

2. Starting 8 : 15 a.m finishing time = 12 : 40 p.m

		hrs.	Mins
8 : 15 a.m. ⟶ 9 : 00 a.m.			45
9 : 00 a.m. ⟶ 12 : 00 noon		3	
12 : 00 noon ⟶ 12 : 40 p.m.	+		40
		$3^{①}$	85
			(– 60)
		4	25

∴ He spend 4 hrs. 25 mins in school work

3. Start time = 8 : 40 a.m.
   Finshing time = 11 : 15 a.m.

		hrs.	Mins
8 : 40 a.m. to 9 : 00 a.m.			20
9 : 00 a.m. to 11 : 00 a.m.		2	
11 : 00 a.m. to 11 : 15 a.m.	+		15
		2	35

∴ Duration of show = 2 hrs. 35 mins

4. Start time = 7 : 10 p.m.
Finshing time = 9 : 42 p.m.

		hrs.	Mins
7 : 10 p.m. ⟶ 8 : 00 p.m.			50
8 : 00 p.m. ⟶ 9 : 00 p.m.		1	
9 : 00 p.m. ⟶ 9 : 42 p.m.	+		42
		$1^{\overset{+1}{\textcircled{}}}$	92
			(– 60)
		2	32

∴ Neeraj watch movie for 2 hrs 32 mins

5. Start time = 6 : 20 a.m.
Finshing time = 11 : 20 a.m.

		hrs.	Mins
6 : 20 a.m. ⟶ 7 : 00 a.m.			40
7 : 00 a.m. ⟶ 11 : 00 a.m.		4	
11 : 00 a.m. ⟶ 11 : 20 a.m.	+		20
		4	60
∴ It takes 5 hrs to cover the journey.	+	1	– 60
		5	00

6. Start time = 6 : 40 a.m.
Finshing time = 11 : 20 a.m.

		hrs.	Mins
6 : 40 a.m. ⟶ 7 : 00 a.m.			20
7 : 00 a.m. ⟶ 11 : 00 a.m.		4	
11 : 00 a.m. ⟶ 11 : 20 a.m.	+		20
		4	40

∴ It takes 4 hrs 40 mins to cover the journey.

7. Morning
Start time = 7 : 15 a.m.
Finshing time = 9 : 00 a.m.

		hrs.	Mins
7 : 15 a.m. ⟶ 8 : 00 a.m.			45
8 : 00 a.m. ⟶ 9 : 00 a.m.	+	1	
		1	45

= 1 hrs 45 mins

Evening

Start time = 6 : 15 p.m.

Finshing time = 7 : 45 p.m.

		hrs.	Mins
6 : 15 p.m. ⟶ 7 : 00 p.m.			45
7 : 00 p.m. ⟶ 7 : 45 p.m.	+		45
		(1)	90
			– 60
		1	30

= 1 hrs 30 mins

Total time duration of water supply

	Hrs	Mins
	1	45
+	1	30
	2	75
+	1	(-60)
	3	15

∴ 3 hrs 15 mins

8. a. 5 hrs. after 7 : 10 a.m.
   5 + 7 : 10 a.m = 12 : 10 noon
   b. 3 hrs. 10 mins after 1 : 25 am
   3 hrs 10 mins + 1 : 25 a. m. = 4 : 35 a.m
   c. 4 hrs. 25 mins after 7 : 30 a.m.
   4 hrs 25 mins + 7 : 30 a.m. = 11 : 55 a.m
9. a. 2 hrs. before 3 : 30 a.m.
   3 : 30 am = 2 hrs = 1 : 30 a.m.
   b. 5 hrs. before 8 : 10 a.m.
   8 : 10 a. m. – 5 hrs = 3 : 10 a.m.
   c. 2 hrs. before 10 : 05 a.m.
   10 : 05 a. m. – 2 hrs = 8 : 05 a.m.
   d. 3 hrs. before 6 : 20 p.m.
   6 : 20 p. m. – 3 hrs = 3 : 20 p.m.

12.3

1. a. Hrs hand b. Seconds
2. a. 5 hrs = 5 × 60 min = 300 min b. 3 days = 3 × 24 hrs = 72 hrs
   c. 1 year = 52 weeks d. 3 years = 3 × 12 = 36 months
   e. 1 decade = 10 yrs f. 1 century = 100 yrs

12.4

1. a. i) 1 hrs 25 min = 60 min + 25 min = 85 min
   b. i) 1 minute = 60 seconds
   c. iii) 2 hrs after 3 : 30 a.m. = 5 : 30 a.m.
2. a.

hrs	mins
3	35
+ 4	50
7	85
+1	– 60
8	25

= 8 hrs 25 mins

b.

hrs	mins
1	35
+ 8	25
9	60

= 10 hrs

c.

hrs	mins
2	10
+ 3	35
5	45

= 5 hrs 45 mins

d.

hrs	mins
5	50
+ 5	55
10	105
+1	– 60
11	45

= 11 hrs 45 mins

3. a.

hrs	mins
7	50
– 6	30
1	20

= 1 hrs 20 mins

b.

hrs	mins
8	50
– 6	45
2	05

= 2 hrs 5 mins

c.

hrs	mins
10	40
– 7	05
3	35

= 3 hrs 35 mins

d.

hrs	mins
17	25
– 15	15
2	10

= 2 hrs 10 mins

4. Farah studied French for = 1 hrs 30 mins
   Farah studied Science for = 2 hrs 20 mins

Total hrs of study = 1 hrs 30 mins + 2 hrs 20 mins

	hrs	mins
	1	30
+	2	20
	3	50

Hence, Farah studied for 3 hrs 50 mins

5. Start time = 6 : 30 a.m.
Finish time = 8 : 05 a.m.
Exhibition last for =

		hrs.	Mins
6 : 30 a.m. to 7 : 00 a.m.			30
7 : 00 a.m. to 8 : 00 a.m.		1	
8 : 00 p.m. ⟶ 8 : 5 p.m.	+		5
		1	35

Hence, exhibition last for 1 hrs 35 mins.

6. Mr. Maurya leaves office at = 8 : 45 a.m
Time taken to reach office = 1 hrs 25 mins
Reaching time at office = 8 : 45 + 1 hrs 25 mins
= 9 hrs 65 mins
= 10 : 05 a.m.

12.5

1. a. 0530 hrs b. 1930 hrs c. 0030 hrs d. 1230 hrs
e. 0055 hrs f. 1255 hrs g. 0225 hrs h. 1525 hrs
i. 1050 hrs j. 2250 hrs k. 1830 hrs l. 0630 hrs

1. a. 12 : 35 a.m. b. 9 : 05 p.m. c. 10 : 45 a.m. d. 11:36 a.m.
e. 12 : 50 p.m. f. 1 : 55 a.m. g. 11 : 28 p.m. h. 3 : 32 a.m.
i. 9 : 20 p.m. j. 6 : 40 p.m. k. 6 :30 a. m. l. 12 : 30 p.m.

12.6

1. 30 days — April, June, September, November
31 days— January, March, May, July, August, October, December
2. a. 366 days b. 365 days 3. a. 29 days b. 28 days
4. 1996, 2000, 2100, 2104, 2200 (all these are divisible by 4) so they are leap year.
5. Days from 8th Jan 2014 to 3rd March 2014
No. of days in Jan = 31 – 8 + 1 = 24
No. of days in Feb. = 28
No. of days in March = 3
Total = 24 + 28 + 3 = 55 days
6. Boy fell sick on = 12 Feb, 2010

Recovered from illness = 8 April, 2010
No. of days in Feb. = 28 – 12 + 1 = 17
No. of days in March = 31
No. of days in April = 7
Total days = 17 + 31 + 7 = 55
Hence, he was sick for 55 days

7. a. 2nd July 2022 = Monday
   2nd July + 7 days = 9th July = Monday
   9th July + 7 days = 16th July = Monday
   10th July + 7 days = 23th July = Monday
   So 22nd July 2022 = Sunday
   b. 2nd July 2022 = Monday
   2nd July + 7 days = 9th July = Monday
   9th July + 7 days = 16th July = Monday
   16th July + 7 days = 23rd July = Monday
   23rd July + 7 days = 30th July = Monday
   30rd July + 7 days = 6th August = Monday
   26th July + 7 days = 13th August = Monday
   So, 9th August 2022 = Thursday
8. Starting day of exam = April 3
   Ending day of exam = April 28
   No. of days exams continue = 28 – 3 + 1 = 26 days
9. Age of Yasmeen = 17 yrs 3 months 20 days
   Sister age is = 12 yrs 5 months 28 days
   Difference of ages

	yrs	months	days
	~~17~~ 16	~~3~~ 2	~~20~~ (20 + 30) = 50
–	12	5	28
	4	9	22

   = 4 yrs 9 months 22 days
10. Do it yourself

Revision

1. a. iii) Seconds b. iii) Latin c. iv) 3600 d. iv) 1830 hrs
   e. ii) 6 hrs f. iv) 2020 as it is divisible by 4
   g. iii) 2 hrs 30 mins = 120 + 30 = 150 mins
   h. iv) 7 days 7 hrs = 24 × 7 + 7 = 168 + 7 = 175 hrs i. iv) 1300 hrs
   j. ii) 1200 hrs k. ii) 7 months l. iii) 31 + 31 = 62 days

13.1

1. a. ₹ 0.05 or 0.5 p b. ₹ 0.65 or 0.65 p c. ₹ 11.04
   d. ₹ 4.05 e. ₹ 1.84 f. ₹ 200.08
   g. ₹ 63.45 h. ₹ 33.90 i. ₹ 205.15
2. a. ₹ 36.50 = Rupees thirty six and paisa fifty
   b. ₹ 50.05 = Rupees fifty and paisa five
   c. ₹ 175.25 = Rupees one hundred seventy five and paisa twenty five
   d. ₹ 94.00 = Rupees ninety four
   e. ₹ 2004.85= Rupees two thousand four and paisa eighty five
   f. ₹ 0.34 = Thirty four paise
   g. ₹ 1.08 = Rupees one and paisa eight
   h. ₹ 0.08 = Eight paisa
3. a. 44 rupees 65 p. As ₹ 1 = 100
   = 4400 p + 65 p = 4465 p
   b. 105 rupees 50 p.
   = 10500 p + 50 p = 10550 p
   c. 200 rupees 05 p.
   = 20000 p + 05 p = 20005 p
   d. 1025 rupees 20 p.
   = 102500 p + 20 p = 102520 p
   e. 9 rupees 09 p.
   = 900 p + 09 p = 909 p
   f. 518 rupees 65 p.
   = 51800 p + 65 p = 51865 p
   g. 801 rupees 01 p.
   = 80100 p + 01 p = 80101 p
   h. 1 rupees 15 p.
   = 100 p + 15 p = 115 p
4. a. ₹ 10.50 = ₹ 10 + 50 p
   = 1000 p + 50 p
   = 1050 p
   b. ₹ 43.05 = ₹ 43 + 05 p
   = 4300 p + 05 p
   = 4305 p
   c. ₹ 537.18 = ₹ 537 + 18 p
   = 53700 p + 18 p
   = 53718 p
   d. ₹ 800.80 = ₹ 800 + 80 p
   = 80000 p + 80 p
   = 80080 p
   e. ₹ 9.08 = ₹ 9 + 8 p
   = 900 p + 8 p
   = 908 p
   f. ₹ 231.42= ₹ 231 + 42 p
   = 23100 p + 42 p
   = 23142 p
   g. ₹ 1030.25 = ₹ 1030 + 25 p
   = 103000 p + 25 p
   = 103025 p
   h. ₹ 606.14 = ₹ 606 + 14 p
   = 60600 p + 14 p
   = 60614 p
5. a. 1000 p = ₹ 10 b. 10835 p = ₹ 108.35
   c. 4040 p = ₹ 40.40 d. 692 p = ₹ 6.92
   e. 1005 p = ₹ 10.05 f. 203 p = ₹ 2.03
   g. 75 p = ₹ 0.75 h. 80 p = ₹ 0.80

i. 1500 p = ₹ 15 j. 20000 p = ₹ 200
k. 5050 p = ₹ 50.50 l. 1808 p = ₹ 18.08

13.2

1. Cost of suit = ₹ 2375
Cost of shirt = ₹ 480
Cost of belt = ₹ 125.50
Total money spend is = ₹ 2375 + ₹ 480 + ₹ 125.50

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

Hence, total money spend is ₹ 2980.50

2. Cost of pair of jeans = ₹ 395.50
Cost of pair of shoes = ₹ 270.95
Total money spend is = ₹ 395.50+ ₹ 270.95

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

Hence, total money spend is ₹ 666.45

3. Cost of frock = ₹ 170.75
Money with her = ₹ 100 + 50 = ₹ 150
Money required to buy the frock = ₹ 170.75 – ₹ 150

	₹			P	
	1	7	0	7	5
–	1	5	0	0	0
		2	0	7	5

Hence, she needs ₹ 20.45 to buy the frock

4. Money spent by Paramjeet = ₹ 63.50
Money spent by Navjot = ₹ 122.75
Navjot spent more money than Paramjeet = ₹ 122.75 – ₹ 63.50

	₹			P	
	1	1 2 ~~2~~	12 ~~2~~	7	5
–		6	3	5	0
		5	9	2	5

Hence, Navjot spent ₹ 59.25 more money than Paramjeet

5. Earning in 1 hr = ₹ 95
   Earning in 1 day = ₹ 95 × 8
   Earning in 7 days = ₹ 760 × 7 = ₹ 5320
6. Cost of pen = ₹ 48.50
   Cost of 3 pens = ₹ 48.50 × 3 = ₹ 145.50
   Money given to shopkeeper = ₹ 200
   Money got back shopkeeper = ₹ 200 – ₹ 145.50

	₹		P
	1 9 9	10	
	2 ~~0~~ ~~0~~	~~0~~	0
–	1 4 5	5	0
	5 4	5	0

   Hence, he got back ₹ 54.50
7. Pocket money recieved weekly = ₹ 320.25
   Pocket money recieved daily = ₹ 320.25 ÷ 7

```
7 ) 3 2 0 . 2 5 ( 45.75
  – 2 8 ↓
    4 0
  – 3 5 ↓
    5 2
  – 4 9 ↓
      3 5
    – 3 5
      0
```

   Hence, her daily pocket money is ₹ 45.75
8. Cost of 6 m cloth = ₹ 264
   Cost of 1 m cloth = ₹ 264 ÷ 6 = ₹ 44
   Cost of 4 m cloth = ₹ 44 × 4 = ₹ 176
9. Cost of 10 kg potatoes = ₹ 103.50
   Cost of 1 kg potatoes = ₹ 103.50 ÷ 10 = ₹ 10.350
10. Cost of 8 soap cakes = ₹ 60
    Cost of 1 soap cakes = ₹ 60 ÷ 8 = ₹ 7.5
    Cost of 5 soap cakes = ₹ 7.5 × 5 = ₹ 37.5

13.3

1. Zuhi Provision Store
   Sec-25 Noida

S.No.	Name of item	Quantity	Rate	Amount
1.	Sugar	6 kg	₹ 26.50	₹ 159
2.	Rice	5 kg	₹ 36.40	₹ 182
3.	Rajma	4 kg	₹ 18.75	₹ 75
4.	Dal	2 kg	₹ 23.60	₹ 47.20
5.	Coffee Powder	2 tins	₹ 47	₹ 94
6.	Chillies	2 kg	₹ 56.80	₹ 113.60
7.	Refined oil	4 kg	₹ 56	₹ 224
		Total amount		₹ 894.80

2. Aamir General Store
Allahabad

S.No.	Name of item	Quantity	Rate	Amount
1.	Bath tub	2	₹ 265	₹ 530
2.	Mug	4	₹ 14.50	₹ 58
3.	Duster	5	₹ 8.40	₹ 42
4.	Basket	3	₹ 17.60	₹ 52.80
5.	Table Cover	2	₹ 105.75	₹ 211.50
6.	Gum bottle	1	₹ 15.20	₹ 15.20
7.	Surf	2	₹ 36.65	₹ 73.30
8.	Washing Soap	6	₹ 8.35	₹ 50.10
		Total amount		₹ 1032.90

2. M/S Mumbai Stationers, Shivaji Park

S.No.	Name of item	Quantity	Rate	Amount
1.	Pencils	5	₹ 3.60	₹ 18
2.	Ink bottle	2	₹ 23.50	₹ 47
3.	Notebooks	18	₹ 14.50	₹ 261
4.	Colour box	1	₹ 21.50	₹ 21.50
5.	Eraser	5	₹ 2.50	₹ 12.50
6.	Drawing sheet	6	₹ 1.50	₹ 9.00
		Total amount		₹ 369

Revision

1. b. $\frac{1000\ P}{25\ P}$ = 40 coins

2. a. $\frac{500}{50}$ = 10 notes

3. d. $\frac{1,00,000}{100}$ = 1000 notes

4. b. Cost of 18 packets = 22.50
Cost of 1 packets = 22.50 ÷ 18

$$
\begin{array}{r}
18\overline{)22.50}\,(1.25 \\
-\,18\downarrow \\
\hline
\,45 \\
-\,36\downarrow \\
\hline
\,90 \\
-\,90 \\
\hline
\,0
\end{array}
$$

5. Annual Salary = 148176

Monthly salary = 148176 ÷12

$$
\begin{array}{r}
12\overline{)148176}\,(12348 \\
-\,12\downarrow \\
\hline
\,28 \\
-\,24\downarrow \\
\hline
\,41 \\
-\,36\downarrow \\
\hline
\,57 \\
-\,48\downarrow \\
\hline
\,96 \\
-\,96 \\
\hline
\,0
\end{array}
$$

6. Cost of 1 kg sugar = ₹ 18.65

Cost of 45 kg sugar = ₹ 18.65 × 45 = ₹ 839.25

7. Cost of 6 *l* petrol = ₹ 388

Cost of 1 *l* petrol = ₹ 388 ÷ 6

$$
\begin{array}{r}
6\overline{)388.0}\,(64.66 \\
-\,36\downarrow \\
\hline
\,28 \\
-\,24\downarrow \\
\hline
\,40 \\
-\,36 \\
\hline
\,40 \\
-\,36 \\
\hline
\,4
\end{array}
$$

8. Cost of 4 pencils = ₹ 3.30 × 4

= ₹ 13.2

Cost of 2 erasers = ₹ 1.85 × 2

= ₹ 3.7

Total amount = ₹ 13.2 + ₹ 3.7 = ₹ 16.9

9. a. < b. = c. = d. > e. =

10.

Item	Qty	Rate per piece	Amount
Ice cream	2	₹ 13.85	₹ 27.70
Burger	3	₹ 22.25	₹ 66.75
Hat	1	₹ 65.40	₹ 65.40
		Total amount	₹ 159 .85

11. Cost of 3 chocolates = ₹ 17.50 × 3 = ₹ 52.50
Money given to shopkeeper = ₹ 100
Money get back = ₹ 100 – ₹ 52.50 = ₹ 47.50

14.1

1. a. Swing + see saw + slide + fountain = 10 + 8 + 3 + 6 = 27
   b. Swing c. slide d. 10 – 6 = 4
2. a. Toffees = 7 × 2 = 14
   b. Candles= 12 × 2 = 24
   Caps = 7 × 2 = + 14
   38
c. caps, gifts, candles, toffees
d. 24 – 12 = 12

14.2

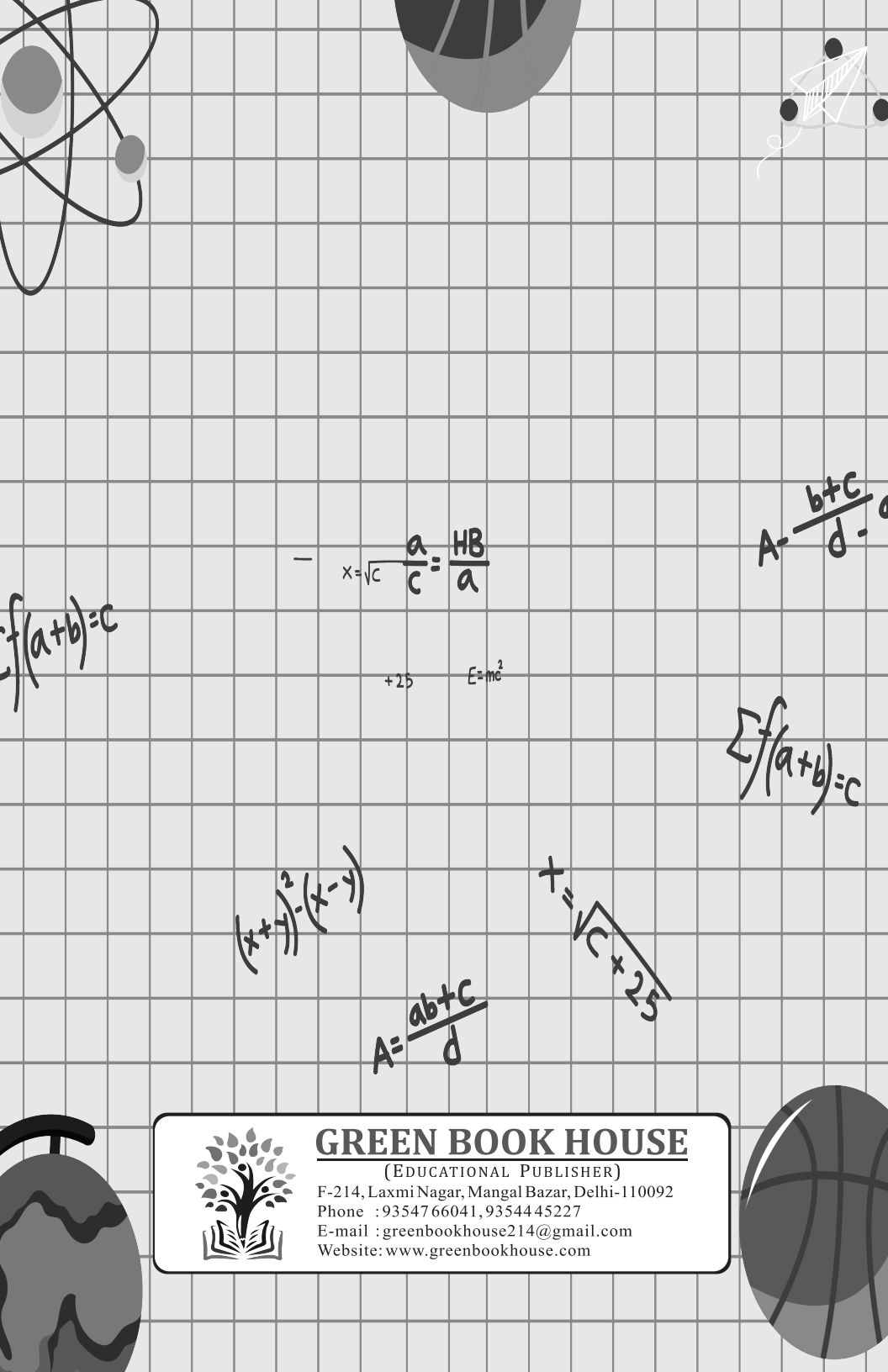
1. Do it yourself
2. Do it yourself
3. a. milk b. 8 c. 1 d. Sandwich e. 5 f. 6 – 2 = 4
   g. 9 + 2 + 6 + 5 + 8 + 1 = 31
4. a. cricket b. 8 c. 12–10 = 2
   d. 6 + 12 + 16 + 10 + 8 = 52 e. 16

Revision

1.

Result	Tally marks	No. of Matches
Won	𝍸 𝍸 𝍸	15
Lost	𝍸 |||	8
Draw	𝍸 ||	7

a. 15 b. 8 c. 15 + 8 + 7 = 30
2. a. Teacher, Policeman b. Businessman
   c. 25 + 10 + 30 + 15 + 5 + 30 = 115 students



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(EDUCATIONAL PUBLISHER)

F-214, Laxmi Nagar, Mangal Bazar, Delhi-110092

Phone : 9354766041, 9354445227

E-mail : greenbookhouse214@gmail.com

Website: www.greenbookhouse.com