

A ANSWERS

CHAPTER ▶ 1

Exercise 1.1

- (i) 8017 (ii) 2,60,430 (iii) 2010008 (iv) 2,07,63,078

(v) 121212088 (vi) 7,03,74,033
- (i) Two lakh thirty four thousand eight hundred sixteen.

(ii) Thirty two lakh seventy five thousand eight hundred twenty nine.

(iii) Sixty five crore thirty two lakh seventy five thousand eight hundred twenty nine.

(iv) Three crore twenty-two lakh eighty seven thousand eight.

(v) Three crore five lakh thirty thousand six hundred four.
- (i) $10000 + 5000 + 700 + 60 + 8$ (ii) $2000000 + 5000 + 300 + 40 + 0$

(iii) $1000000 + 70000 + 3000 + 400 + 80 + 7$ (iv) $9000000 + 600000 + 4000 + 70 + 0$

(v) $200000000 + 80000000 + 3000000 + 900000 + 40000 + 2000 + 500 + 40 + 7$
- (i) 6,82,603 (ii) 71,34,005 (iii) 9,09,809

(iv) 2,05,07,905 (v) 30,98,488
- (i) 2, 2000 (ii) 8, 80 (iii) 8, 800000

(iv) 1, 1000 (v) 9, 9000000
- 100 thousands
- 10000 thousands
- 8999100

Exercise 1.2

- (i) Greatest = 4892 (ii) Greatest = 15800

Smallest = 4370 Smallest = 15073

(iii) Greatest = 25286 (iv) Greatest = 24659

Smallest = 25210 Smallest = 6895

2. (i) 6421, 1246 (ii) 7430, 3047 (iii) 8431, 1348 (iv) 9710, 1079
(v) 8431, 1348
3. (i) 88752, 22578 (ii) 99651, 11569 (iii) 77510, 11057 (iv) 88762, 22078
(v) 88720, 22078
4. (i) 1111 (ii) 1023
5. (i) < (ii) > (iii) < (iv) < (v) >
6. (i) 270613, 270714, 2706143, 2707142, 2760142
(ii) 6283597, 6284507, 62940507, 63851307
(iii) 63514759, 63521047, 7354206, 7355014, 102345680
(iv) 19998, 200175, 201200, 1702497, 1704382, 1712040
7. (i) 132145, 121345, 113234, 112345
(ii) 46032, 3624, 3426, 3246
(iii) 57168, 56187, 56178, 51768
(iv) 10012458, 8015032, 8014306, 8014257, 700087
8. 103, 310, 130, 507, 705, 513, 501, 731, 713, 137, 503, 701, 703, 571, 301, 570, 750, 510, 315, 715, 517, 751 etc/

Exercise 1.3

1. (i) Ten (ii) Ten (iii) Ten (iv) Ten
2. (i) 14,321,716 — Four million three hundred twenty one thousand seven hundred sixteen.
(ii) 5,030,469 — Five million thirty thousand four hundred sixty nine.
(iii) 40,050,017 — Forty million fifty thousand seventeen.
(iv) 78,921,092 — Seventy eight million, nine hundred twenty one thousand ninety two.
(v) 7,452,283 — Seven million four hundred fifty two thousand two hundred eight three.
(vi) 99,985,102 — Ninety nine million nine hundred eighty five thousand, one hundred two.
3. (i) Two million five thousand two hundred nineteen.
(ii) Forty two million six hundred one thousand twenty four
4. (i) 12,60,430 (ii) 8,02,74,044

Exercise 1.4

- | | | |
|-------------|--------------|----------------|
| 1. 3,08,429 | 2. ₹12283810 | 3. 1,43,760 |
| 4. 4500 | 5. ₹318 | 6. 27666050 |
| 7. 4356121 | 8. 177 boxes | 9. 180 glasses |

Exercise 1.5

- | | | | |
|-------------------------|----------------------------|------------|-----------|
| 1. (i) 20
(v) 9010 | (ii) 40
(vi) 6930 | (iii) 20 | (iv) 90 |
| 2. (i) 100
(v) 9600 | (ii) 300
(vi) 7800 | (iii) 400 | (iv) 600 |
| 3. (i) 6000
(v) 8000 | (ii) 2000
(vi) 6,00,000 | (iii) 4000 | (iv) 6000 |
| 4. 730, 160, 570, 600 | | | |
| 5. 450 to 549 | | | |

Exercise 1.6

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|----------------------|------------------|----------------|---------------|
| 1. (i) 100
(v) 35 | (ii) 160 | (iii) 140 | (iv) 110 |
| 2. (i) 600 | (ii) 500 | (iii) 4 | (iv) 1,00,000 |
| 3. (i) 8000 | (ii) 8000 | | |
| 4. (i) 120000 | (ii) 1,50,00,000 | (iii) 6,00,000 | (iv) 270000 |
| 5. (i) 3
(v) 35 | (ii) 4 | (iii) 10 | (iv) 9 |

Exercise 1.7

- | | | | |
|---|------------------------------------|------------------------|------------------------|
| 1. (i) 108
(v) 82 | (ii) 428 | (iii) 120 | (iv) 393 |
| 2. (i) XXXVI
(v) LXXXIII
(ix)XCIX | (ii) XLIII
(vi) LXXXI
(x) CV | (iii) LIV
(vii) XCI | (vi) LXI
(viii) XCV |
| 3. (i) 9 | (ii) 15 | (iii) 27 | (iv) 34 |

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|----|-----------|-----------|----------|-----------|
| | (v) 40 | (vi) 43 | (vii) 69 | (viii) 71 |
| | (ix) 86 | (x) 57 | (xi) 45 | (xii) 98 |
| 4. | (a) (iii) | (b) (v) | (c) (ii) | (d) (i) |
| | (e) (vi) | (f) (vii) | (g) (iv) | |

CHAPTER ▶ 2

Exercise 2.1

1. 27835, 27836, 27837
2. 19
3. (i) 910 (ii) 34527 (iii) 76895
4. (i) 9999 (ii) 7654321 (iii) 500399
5. (i) $509 > 540$ (ii) $416 < 614$ (iii) $1002 < 10002$ (iv) $2005 < 5002$
(v) $10023001 > 9830415$
6. (i) 30014, 300015, 30016, 30017, 30018, 30019
(ii) 89673, 89674, 89675, 89676, 89677, 89678, 89679
7. (i) F (ii) T (iii) T (iv) F
(v) T (vi) T
8. 100

Exercise 2.2

1. (i) 425,172 (ii) 0 (iii) 0 (iv) 7
2. 1450
3. (i) 1000 (ii) 1808 (iii) 1700 (iv) 2480
4. (i) $1732 = 1732$ (ii) $1246 \neq 1256$
5. (i) 575 (ii) 747

Exercise 2.3

1. (i) 10306 (ii) 116561 (iii) 353536 (iv) 5764
2. (i) 1032 (ii) 2672
3. 99001 4. 47262, Do it yourself 5. 28954 6. 33050

Exercise 2.4

- | | | | | |
|----|--------------------------|--------------------------|--------------|-------------|
| 1. | (i) 0
(v) 5 | (ii) 7680
(vi) (36+4) | (iii) 374 | (iv) 91 |
| 2. | (i) 176800
(v) 540000 | (ii) 85500 | (iii) 278000 | (iv) 9500 |
| 3. | (i) 5940
(v) 56900 | (ii) 66100 | (iii) 678000 | (iv) 631000 |
| 4. | (i) 589356 | (ii) 87962 | (iii) 168840 | |
| 5. | 999900 | 6. 3960 | 7. 406000 | |
| 8. | 1966500 | 9. 1500 | 10. 3900 | |

Exercise 2.5

- | | | | | |
|----|-------------------|-------------------|-------------------|-----------------|
| 1. | Do it yourself | 2. 9877 | | |
| 3. | (a) 348, 350, 352 | (b) 530, 535, 540 | (c) 481, 478, 475 | (d) 90,110,130. |

CHAPTER ▶ 3

Exercise 3.1

- | | | | | |
|----|-------------------|--------------------|----------|----------|
| 1. | (i) 144
(v) 4 | (ii) 35
(vi) 44 | (iii) 23 | (iv) 37 |
| 2. | (i) 11
(v) 100 | (ii) 5
(vi) 18 | (iii) 60 | (iv) 100 |

Exercise 3.2

- | | | | | |
|----|--|---|---|--|
| 1. | (i) 1, 2, 3, 4, 6, 8, 12, 24, 18, 36
(iv) 1, 3, 7, 21, 18, 48, 72, 144 | (ii) 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
(v) 1, 3, 9, 27 | (iii) 1, 2, 3, 4, 6, 9, 12,
(vi) 1, 5, 25, 125 | (vii) 1, 2, 3, 4, 6, 8, 12, 24, 36,
(viii) 1, 2, 4, 8, 16, 32, 64 |
| 2. | (i) 6, 12, 18, 24, 30
(iv) 16, 32, 48, 64, 80
(vii) 19, 38, 57, 76, 95 | (ii) 12, 24, 36, 48, 60
(v) 5, 10, 15, 20, 25
(viii) 25, 50, 75, 100, 125 | (iii) 8, 16, 24, 32, 40
(vi) 7, 14, 21, 28, 35 | |

3. (i) $\rightarrow b$ (ii) $\rightarrow d$ (iii) $\rightarrow a$ (iv) $\rightarrow c$
4. 64, 72, 80, 88, 96

Exercise 3.3

1. Prime numbers : 2, 3, 5, 7, 11, 13, 17, 19
Composite number : 4, 6, 8, 9, 10, 12, 14, 15, 16, 18
2. Prime – 23, 31, 109 Composite 26, 51
3. 11, 13, 17, 19, 23, 29
4. (i) $36 = 7 + 29$ (ii) $98 = 79 + 19$
5. (i) $84 = 41 + 43$ (ii) $120 = 59 + 61$
6. (i) $49 = 3 + 5 + 41$ (ii) $35 = 5 + 7 + 23$
7. 90, 91, 92, 93, 94, 95, 96
8. (i) F (ii) F (iii) T (iv) F (v) T

Exercise 3.4

1. (i) and (iii) 2. (i), (ii), (iii), (iv), (v), (vii), (viii)
3. (i), (v), (vi) and (viii) 4. (i) (iii), (iv) and (v)
5. (i) 2 (ii) 0 (iii) 1 (iv) 2
6. (i) 2 (ii) 0 (iii) 0 (iv) 1
7. 6

Exercise 3.5

1. (i) $2 \times 2 \times 3 \times 7$ (ii) $2 \times 2 \times 2 \times 3 \times 3 \times 3$ (iii) $2 \times 3 \times 5 \times 5$ (iv) $5 \times 5 \times 29$
(v) $2 \times 5 \times 23$ (vi) $2 \times 5 \times 11 \times 11 \times 11$ (vii) $3 \times 5 \times 11 \times 13$ (viii) $2 \times 2 \times 2 \times 2 \times 2 \times 5$
2. (i) 12, 2, 2 (ii) 2, 3, 5, 2 (iii) 4, 2, 2
3. 10000; 2, 2, 2, 2, 5, 5, 5, 5
4. 210; 2, 3, 5, 7
5. 1 which is a factor of every number and any factor which is itself a composite number

6. (i) 3 (ii) 2 (iii) 5 (iv) 8 (v) 1
 7. (i) 4, 8, 16 (ii) 35, 70, 105

Exercise 3.6

1. (i) 6 (ii) 14 (iii) 34 (iv) 34
 (v) 16 (vi) 52 (vii) 36 (viii) 18
 (ix) 1 (x) 5
 2. (i) 2 (ii) 95 (iii) 94 (iv) 22
 (v) 12 (vi) 17
 3. 15 4. 87 5. 27 cm 6. 24
 7. 75 cm
 8. 7m 9. 35 cm 10. 80

Exercise 3.7

1. (i) 180 (ii) 360 (iii) 90 (iv) 420
 (v) 2914 (vi) 450
 2. (i) 704 (ii) 1080 (iii) 300 (iv) 540
 (v) 5940 (vi) 5152
 3. 186
 4. 127 5. 9660 and 10080 6. 858
 7. 2:12 PM 8. 2016 cm

Exercise 3.8

1. 192 2. 207 3. 35 4. LCM = 360, Number = 72
 5. 8

CHAPTER ▶ 4

Exercise 4.1

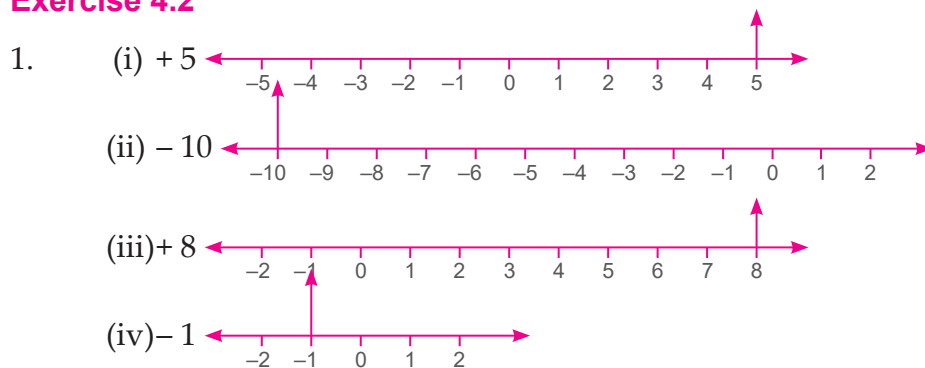
1. (i) Decrease in population (ii) 300 AD
 2. (i) -7 (ii) 1 (iii) -5 (iv) N

3. (i) > (ii) < (iii) < (iv) <
 (v) < (vi) >

4. (i) $-125, -60, -48, -21, -4$ (ii) $-98, -75, -47, -32, -14$

5. (i) $-2, -15, -26, -53, -85$ (ii) $-27, -36, -76, -115, -160$

Exercise 4.2



2. (i) 6 (ii) -1 (iii) 4 (iv) 7

3. (i) > (ii) < (iii) < (iv) =

4. $-19, -18, -17, -16,$ 5. $-11, -12, -13, -14$

6. (i) $|-113|, |-64|, |-18|, |-46|, |-72|$

(ii) $|-72|, |-47|, |-30|, |48|, |-54|$

7. (i) $1801, |-68|, |-32|, |-52|, |-75|$

(ii) $|-52|, |48|, |-28|, -47, |-50|$

8. (i) $+49$ (ii) $+3546$ (iii) $+1$ (iv) 23

9. (i) 6 (ii) 7 (iii) 0 (iv) 193

10. $-2, -1, 0, 1, 2, 3, 4.$

Exercise 4.3

1. (a) -238 (b) 110 (c) -131 (d) 125

2. (a) -6 (b) -8 (c) 910 (d) -100

3. (a) -36 (b) -700 (c) 169 (d) -1200

(e) 0 (f) 80 (g) -75 (h) -720

4. (a) -9 (b) 0 (c) -9 (d) -625

- | | | | | |
|-----|---|---------|--------------|---------------------|
| | (e) 23 | (f) -24 | (g) -1 | (h) -720 |
| 5. | (a) | -12 (b) | 13 (c) | 95 (d) -21 |
| 6. | 174 | 7. 3 | 8. -140 | 9. 116 |
| 10. | 106 km | 11. 56 | 12. positive | |
| 13. | Difference = 2; [(a + 1) - (a - 1) = 2] | | | 16. -45 °C to 12 °C |

CHAPTER ▶ 5

Exercise 5.1

- | | | | | | |
|----|-------------------|--------------------|---------------------|----------------------|--------------------|
| 1. | (i) $\frac{1}{3}$ | (ii) $\frac{6}{8}$ | (iii) $\frac{3}{4}$ | (iv) $\frac{13}{36}$ | (v) $\frac{5}{12}$ |
| 2. | Do it yourself | | 3. Do it yourself | | |
| 4. | (i) N = 4, D = 10 | (ii) N = 6, D = 7 | (iii) N = 8, D = 5 | (iv) N = 3, D = 13 | |
| 5. | $\frac{8}{24}$ | 6. $\frac{40}{60}$ | | | |
| 7. | (i) $\frac{4}{6}$ | (ii) $\frac{7}{3}$ | (iii) $\frac{8}{5}$ | (iv) $\frac{9}{7}$ | |

Exercise 5.2

- | | | | | | |
|----|---|----------------------|--------------------|--------|--|
| 1. | Do it yourself | | | | |
| 2. | (i) < | (ii) = | (iii) < | (iv) > | |
| | (v) = | (v) > | | | |
| 3. | Do it yourself | | | | |
| 4. | $\frac{0}{5}, \frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}$ | 5. (i) $\frac{1}{2}$ | (ii) $\frac{1}{5}$ | | |

Exercise 5.3

- | | | | | |
|----|----------------------|---------------------|----------------------|---------------------|
| 1. | (i) $3\frac{4}{7}$ | (ii) $2\frac{5}{7}$ | (iii) $6\frac{1}{3}$ | (iv) $5\frac{3}{5}$ |
| | (v) $3\frac{1}{6}$ | (vi) $3\frac{8}{9}$ | | |
| 2. | (i) $\frac{47}{5}$ | (ii) $\frac{23}{4}$ | (iii) $\frac{37}{5}$ | (iv) $\frac{53}{5}$ |
| | (v) $\frac{66}{7}$ | (vi) $\frac{76}{9}$ | | |
| 3. | (i), (ii), (iv), (v) | | 4. (ii), (iv), (v) | |

Exercise 5.4

1. (i) $\frac{4}{6} = \frac{6}{9} = \frac{8}{12} = \frac{10}{15} = \frac{12}{18}$ (ii) $\frac{10}{18} = \frac{15}{27} = \frac{20}{36} = \frac{25}{45} = \frac{30}{54}$ (iii) $\frac{26}{34} = \frac{39}{51} = \frac{52}{68} = \frac{65}{85} = \frac{78}{102}$
 (iv) $\frac{14}{20} = \frac{21}{30} = \frac{28}{40} = \frac{35}{50} = \frac{42}{60}$ (v) $\frac{14}{18} = \frac{21}{27} = \frac{28}{36} = \frac{35}{45} = \frac{42}{54}$ (vi) $\frac{10}{24} = \frac{15}{26} = \frac{20}{48} = \frac{25}{60} = \frac{30}{72}$
 (vii) $\frac{18}{22} = \frac{27}{33} = \frac{36}{44} = \frac{45}{55} = \frac{54}{66}$ (viii) $\frac{6}{14} = \frac{9}{21} = \frac{12}{28} = \frac{15}{35} = \frac{18}{42}$
2. (i) Yes (ii) No (iii) No (iv) Yes (v) Yes 3. (i) $\frac{25}{40}$ (ii) $\frac{20}{32}$ (iii) $\frac{45}{72}$ (iv) $\frac{10}{16}$ (v) $\frac{40}{64}$
4. (i) $\frac{5}{7} = \frac{10}{14} = \frac{15}{21} = \frac{30}{42} = \frac{50}{70}$ (ii) $\frac{45}{60} = \frac{15}{20}$ (iii) $\frac{21}{35} = \frac{3}{5}$ 5. (iii) $\frac{5}{21}$
6. Ramesh $\rightarrow \frac{10}{20} = \frac{1}{2}$. Sheela $\rightarrow \frac{25}{50} = \frac{1}{2}$. Jamaal $\rightarrow \frac{40}{80} = \frac{1}{2}$. Yes. 7. (i) $\rightarrow d$, (ii) $\rightarrow e$,
 (iii) $\rightarrow a$, (iv) $\rightarrow c$, (v) $\rightarrow b$

Exercise 5.5

1. (i) < (ii) > (iii) > (iv) >
 (v) > (vi) <
2. (i) $\frac{2}{3}, \frac{4}{3}$ (ii) $\frac{7}{12}, \frac{4}{12}$
3. (i) $\frac{5}{7} > \frac{3}{11}$ (ii) $\frac{9}{13} > \frac{7}{10}$ (iii) $\frac{1}{7} > \frac{3}{7}$ (iv) $\frac{2}{5} > \frac{4}{5}$
 (v) $\frac{8}{14} > \frac{5}{21}$ (vi) $\frac{9}{10} > \frac{7}{15}$ (vii) $\frac{1}{5} > \frac{7}{15}$ (viii) $\frac{9}{20} > \frac{7}{15}$
4. (i) $\frac{4}{15}, \frac{3}{5}, \frac{7}{10}$ (ii) $\frac{2}{5}, \frac{1}{2}, \frac{3}{5}, \frac{3}{4}$ (iii) $\frac{4}{13}, \frac{7}{13}, \frac{9}{13}, \frac{10}{13}$ (iv) $\frac{3}{13}, \frac{9}{20}, \frac{7}{15}, \frac{1}{8}$
5. (i) $\frac{11}{12}, \frac{19}{24}, \frac{5}{16}, \frac{1}{4}$ (ii) $\frac{23}{24}, \frac{31}{36}, \frac{7}{9}, \frac{1}{8}$ (iii) $\frac{8}{5}, \frac{8}{9}, \frac{8}{13}, \frac{8}{17}$ (iv) $\frac{5}{6}, \frac{6}{8}, \frac{2}{4}, \frac{3}{8}, \frac{1}{3}$
6. Rashmi read less 7. Gagan 8. Mansi

Exercise 5.6

1. (i) $\frac{8}{4}$ (ii) $\frac{16}{8}$ (iii) $\frac{9}{6}$ (iv) $\frac{32}{20}$
 (v) $\frac{16}{5}$ (vi) $\frac{49}{9}$ (vii) $\frac{24}{19}$ (viii) $\frac{8}{7}$
 (ix) $\frac{6}{8}$ (x) $\frac{7}{18}$

2. (i) $\frac{7}{10}$ (ii) $\frac{17}{21}$ (iii) $\frac{46}{63}$ (iv) $\frac{22}{15}$
 (v) $\frac{6}{8}$ (vi) $\frac{14}{10}$ (vii) $\frac{41}{10}$ (viii) $\frac{45}{10}$
 (ix) $\frac{73}{132}$ (x) $\frac{5}{6}$ (xi) $\frac{125}{150}$ (xii) $3\frac{1}{2}$
 (xiii) $\frac{22}{7}$ (xiv) $1\frac{19}{20}$ (v) $4\frac{1}{5}$
3. 1. $\frac{1}{6}$ 4. $\frac{7}{12}$ 5. $\frac{5}{7} > \frac{9}{14}$ More $\frac{1}{14}$ 6. $2\frac{11}{15}$
7. $3\frac{3}{8}$ m 8. $8\frac{1}{24}$ 9. $2\frac{11}{12}$ kg 10. $\frac{17}{6}$





CHAPTER ▶ 6

Exercise 6.1

Q1.

	Hundreds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$
(i)	–	1	9	4
(ii)	–	1	2	6
(iii)	–	–	0	8
(iv)	1	0	5	8

- Q2. (i) 19.8 (ii) .173 (iii) 3.761 (iv) 21.952
 (v) 200.7 (vi) 100.21
- Q3. (i) $60 + 7 + \frac{8}{10} + \frac{3}{100}$ (ii) $400 + 70 + 5 + \frac{3}{10}$ (iii) $100 + 70 + 6 + \frac{8}{10}$ (iv) $700 + 00 + 1 + \frac{4}{10}$
 (v) $\frac{2}{10} + \frac{9}{100} + \frac{4}{1000}$
- Q4. (i) point eight (ii) three point five six
 (iii) ten point five eight (iv) Seven zero one point five
 (v) zero point eight five one (vi) Twenty seven point zero zero four
 (vii) one zero zero point five seven point two nine. (viii) One zero five

- Q5. (i) 0.3 (ii) 0.5 (iii) 0.2 (iv) 0.4
 (v) 0.04 (vi) 0.007 (vii) 0.08 (ix) 0.9 (x) 0.005
- Q6. (i) 36.57 (ii) 437.239 (iii) 243.568 (iv) 605.079
- Q7. (i)  (ii) 
 (iii)  (iv) 
- Q8. (i) $6.05 < 6.4 < 6.45 < 6.5 < 6.54$ (ii) $0.06 < 0.6 < 6.06 < 6.6 < 66.6$
- Q9. (i) $30.3 > 30.03 > 3.3 > 3.03 > 3.003$ (ii) $73.03 > 8.73 > 8.073 > 7.33 > 7.3$
- Q10. (i) 34.17 (ii) 738.1

Exercise 6.2

- Q1. (i) $<$ (ii) $<$ (iii) $<$ (iv) $=$
- Q2. (i) $1 > 0.99$ (ii) $1.093 > 1.09$ (iii) $0.3 < 0.4$ (iv) $0.07 > 0.02$
 (v) $0.5 > 0.05$ (vi) $3 > 0.8$ (vii) both are same (viii) $5.64 > 5.603$
- Q3. (i) $\frac{4}{100}$ (ii) $\frac{37}{10}$ (iii) $\frac{456}{100}$ (iv) $\frac{2}{1000}$
 (v) $\frac{6689}{100}$ (vi) $\frac{120042}{1000}$ (vii) $\frac{9375}{1000}$ (viii) $\frac{15008}{1000}$
- Q4. (i) 0.6 (ii) 0.14 (iii) 75.8 (iv) 127.9
 (v) 0.067 (vi) 0.004 (vii) 7.648 (viii) 1.83
- Q5. (i) 0.68, 0.8, 2.7, 2.9 (ii) 0.56, 0.59, 2.526, 4.38
- Q6. (i) 2.85, 2.56, 0.9, 0.409 (ii) 5.78, 1.23, 0.348, 0.29
- Q7. (i) 0.4 (ii) 4.5 (iii) 2.75 (iv) 0.64
 (v) 0.524

Exercise 6.3

- Q1. (i) ₹26.75 (ii) ₹35.08 (iii) ₹6.09 (iv) ₹1.04
- Q2. (i) 0.15m (ii) 0.06m (iii) 1.95 m (iv) 13.28 m
 (v) 9.07 m (vi) 4.19 m (vii) 0.18 m

- Q3. (i) 0.9 cm (ii) 6.7 cm (iii) 16.4 cm (iv) 9.8 cm
(v) 9.3 cm
- Q4. (i) 0.008 km (ii) 0.039 km (iii) 0.087 km (iv) 7.86 7km
(v) 70.005 km
- Q5. (i) 0.564 kg (ii) 1.862 kg (iii) 2.092 kg (iv) 5.415 kg
(v) 27.897 kg
- Q6. (i) 0.019 g (ii) 0.136 g (iii) 0.007 gm (iv) 17.026 gm
(v) 8.067 g

Exercise 6.4

- Q1. (i) 0.7 (ii) 139.73 (iii) 89.48 (iv) 0.86
(v) 692.53 (vi) 4.6 (vii) 0.42 (viii) 1.35
- Q2. (i) 63.245 (ii) 60.262 (iii) 40.065 (iv) 32.588
(v) 497.46 (vi) 110.416
- Q3. 46 kg 30 g Q4. 9.545 km Q5. 21.267 km Q6. ₹26.30
- Q7. 18.270 kg

Exercise 6.5

- Q1. (i) 38.89 (ii) 47.46 (iii) 56.865 (iv) 30.805
(v) 7.327 (vi) 21.905gm (vii) 0.001 (viii) 102.885
- Q2. (i) 1.5 (ii) 2.447 (iii) 2.761 (iv) 101.715
(v) 128.603 (vi) 61.864
- Q3. 113.98 Q4. 3.06 Q5. 10.809 Q6. ₹2.15
- Q7. 4.280 km Q8. 0.815 kg, Kavya.

CHAPTER ▶ 7

Exercise 7.1

- Q1. (i) $b = 2a - 1$ (ii) $q = 4 \times (P - 1)$
- Q2. (i) $3n$ (ii) $3n$ (iii) $5n$ (iv) $2n$

- Q3. (i) $\frac{x}{2} + 7$ (ii) $a + 12$ (iii) $\frac{4x}{y}$ (iv) $3x + y^2$
 (vi) $x - 2y$ (vi) $2(x + x + 3) = 4x + 6$
- Q4. 1 km Q5. $1 + 5$ Q6. (i) The product of y and 3 added to 3.
 (ii) The product of 5 and y subtracted from the product of 42 and x
- Q7. (a) $3x + 1$, $x =$ number of squares (b) $2 \times$ number of triangle + 1, 15 Q8. 35
- Q9. (i) $y = x - 13$ (ii) 3

Exercise 7.2

- Q1. $5, \frac{4}{5}$, are constants $3y, -4x, \frac{5}{4}xy, az, \frac{3x}{y}, \frac{8}{4x}, \frac{-xy}{3y}$ are variables.
- Q2. (i) a^{16} (ii) z^4y^3 (iii) $15x^3y^2$ (iv) $2p^4q^2rs$
- Q3. (iii) and (iv)
- Q4. (i) 7 (ii) -1 (iii) 2 (iv) 25
 (v) 21 (vi) 11
- Q5. (i) 32 (ii) 6 (iii) 26
- Q6. (i), (iv), (v) (viii) and (x)
- Q7. (i) $a^2, 2a^2$ (ii) $xy, -3xy$ (iii) $-5a^2b, 2a^2b$ (iv) $2xyz, 3xyz$
- Q8. (i) 7 (ii) -3 by (iii) $12y^2z^2$ (iv) $28a^2b^2yz$
- Q9. (1) $6 \times b \times b \times b$ (ii) $4 \times p \times p \times p \times q \times q \times q \times q$
 (iii) $7 \times a \times b \times b$ (iv) $x \times u \times u \times y \times y \times z$

Exercise 7.3

- Q1. (i) 3 (ii) 7 (iii) -5 (iv) 8
 (v) 6 (vi) 2 (vii) 60 (viii) 48
 (ix) -16 (x) 32
- Q2. (i) 24 (ii) 9 (iii) 36 (iv) -1
 (v) -1 (vi) 8 (vii) 1 (viii) -54
 (ix) $25/3$ (x) 9
- Q3. 6 Q4. 12

- Q5. (i) $18 + x = 36$ (ii) $x + 2x = 33$ (iii) $4x = 28$ (iv) $\frac{x}{5} = 7$
 (v) $50 - 4y = 2$

Exercise 7.4

- Q1. 27 Q2. 15 Q3. Length = 63 m, breadth = 21 m
 Q4. 22 yrs, 11 yrs
 Q5. 25 Q6. 36, 38 Q7. 8 yrs Q8. 37, 38, 39
 Q9. $b = 21$ m
 $P = 63$ m

CHAPTER ► 8

Exercise 8.1

- Q1. (i) 3 : 4 (ii) 6 : 7 (iii) 3 : 5 (iv) 500 : 1
 (v) 25 : 1 (vi) 1 : 5
 Q2. (i) 4 : 1 (ii) 3 : 4 (iii) 3 : 5 (iv) 1 : 4
 (v) 10 : 1 (vi) 3 : 1 (vii) 100 : 7
 Q3. 3 : 1 Q4. 2 : 3 Q5. (i) ₹ 4500 (ii) 1 : 3 Q6. 3 : 1
 Q7. 16 : 15 Q8. 4 : 3 Q9. (b) Q10. 18.3 g

Exercise 8.2

- Q1. (i) 7 : 8 (ii) 9 : 16 (iii) 7 : 13₹ (iv) 2 : 5
 Q2. (i) 10 : 7 (ii) 2 : 5 (iii) 1 : 7 (iv) 2 : 15
 Q3. ₹45 and ₹75 Q4. 15 : 7 Q5. 8 and 12 Q6. 3 : 2
 Q7. ₹240, ₹360, ₹600 Q8. (i) 7 : 9 (ii) 9 : 16

Exercise 8.3

- Q1. (i) yes (ii) no (iii) yes (iv) no
 (v) yes (vi) no
 Q2. (i) 9 (ii) 24 (iii) 6 (iv) 2
 (v) 105 (vi) 18

- Q3. (i) T (ii) T (iii) F (iv) F
 Q4. 18 Q5. 8 Q6. 12 Q7. ₹615
 Q8. $3 : 40 \neq 1 : 18$ Q9. 8% Q10. 8 kg

Exercise 8.4

- Q1. 10 Q2. ₹375 Q3. Anup made more runs 9 runs
 Q4. ₹64.26 Q5. ₹560 Q6. ₹140 Q7. 66 km
 Q8. ₹192 Q9. ₹999.60 Q10. 8000 chairs

CHAPTER ▶ 9

Exercise 9.1

- Q1. AB, AC, AD, BA, BC, BD, CA, CB, CD, DA, DB, DC
 Q2. (i) Part of a line (ii) infinite (iii) Point (iv) Non-collinear
 Q4. 2 Q5. AB, BA, 1
 Q6. (i) PR, PQ, RS, QS (ii) PA, QC, RB, SD (iii) PR and QS

Exercise 9.2

Do it yourself

Exercise 9.3

- Q1. $\angle DAB$, $\angle ABC$, $\angle BCD$, $\angle CDA$, or $\angle BAD$, $\angle CBA$, $\angle DCB$, $\angle ADC$
 Q2. Scissors, a pair of compasses, tongs
 Q3. (i) B (ii) B, C, X, D (iii) Y, O A, Z (iv) A, Z, B
 Q4. (i) $\angle BAC$ or $\angle CAB$ (ii) $\angle ABC$ or $\angle CBA$ (iii) $\angle BEF$ or $\angle FEB$ (iv) $\angle ADC$ or $\angle CDA$
 (v) $\angle CFG$ or $\angle GFC$ (vi) $\angle DGF$ or $\angle FGD$
 Q5. Yes, $\angle ABD$, $\angle DBC$

Exercise 9.4

- Q1. (i) $\triangle PQR$ (ii) $\triangle ABC$ (iii) $\triangle LMN$

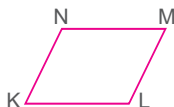
Q2. Angles : $\angle CBA$, $\angle CAB$, and $\angle ACB$
 angle : $\angle ACB$

Sides : AB, BC, CA Base : AB vertical

Q3. 8 triangles

Exercise 9.5

Q1. (i) KL, NM and KN, ML



(ii) $\angle KLM$, $\angle KNM$ and $\angle NKL$, $\angle NML$

(iii) KL, KN, and NM, ML or KL, LM and NM, NK (iv) $\angle KLM$, $\angle LMN$ and $\angle KNM$, $\angle NML$
 (v) $\angle K$, $\angle L$ and $\angle n$, $\angle N$ or $\angle K$, $\angle L$ and $\angle L$, $\angle M$ etc

Q3. Do it yourself.

Q4. Four triangles, $\triangle DAO$, $\triangle AOB$, $\triangle BOC$, $\triangle COD$

Exercise 9.6

- | | | | |
|------------------------------|--------------------------|-------------------------|------------|
| Q1. (i) Half
(v) | (ii) Longest
arc (vi) | (iii) circular
equal | (iv) arc |
| Q3. (i) Radius
(v) centre | (ii) Diameter | (iii) chord | (iv) a r c |
| Q4. (i) F
(v) T | (ii) F | (iii) T | (iv) F |

CHAPTER ► 10

Exercise 10.2

- | | | | |
|----------------------------------|--------------------------------------|--------------------|-------------------|
| Q2. (i) M, LM and MN | (ii) O, AO and OB | (iii) Y, XY and YZ | (iv) O, OP and OQ |
| Q3. (i) Half
(v) Three fourth | (ii) One fourth
(vi) Three fourth | (iii) One fourth | (iv) Three fourth |
- Q4. to 8 Do your self.

Exercise 10.3

- | | | | |
|--|---|--|---|
| Q1. (i) Acute
(v) Zero
(ix) reflex | (ii) obtuse
(vi) Acute
(x) complete | (iii) obtuse
(vii) right
(xi) obtuse | (iv) reflex
(viii) Acute
(xii) straight |
| Q2. (i) 90°
(vi) 120° | (ii) 0° | (iii) 120° | (iv) 90° (v) 60° |

- Q4. (i) 3 (ii) 4 (iii) 6
 Q5. (i) 150° (ii) 180° (iii) 90°

Exercise 10.4

- Q1. (a) Acute angled, isosceles (b) right angled, scalene (c) obtuse angled, Isosceles (d) right angle, Isosceles
 (e) Acute angled, Equilateral (f) obtuse angled, scalene
- Q2. (i) scalene (ii) Iso scales (iii) scalene (iv) Equilateral
- Q3. $a - (iv) b - (v) c - (vi) d - (vii) e - (iii) f - (i) g - (ii)$
- Q4. NO Q5. NO Q6. NO
- Q7. (i) Acute angled (ii) Right angled (iii) Obtuse angled (iv) Acute angled
 (v) Acute angle (vi) Obtuse angled

Exercise 10.5

- Q1. to 3 Do your self. Q4. Trapezium Q5. 16 cm 12 cm
 Q6. All sides 3cm, Rhombus

Exercise 10.6

- Q1. (i) Quadrilateral (ii) Triangle (iii) Pentagon (iv) Octagon
 Q2. True
 Q3. (i) Pentagon (ii) Six (iii) Quadrilateral (iv) Right angles
 Q4. Do it yourself Q5. Do it yourself

Exercise 10.7

- Q1. (i) equal (ii) eight, six, twelve (iii) three (iv) four, eight
 Q2. Cube – 8, 12; Cuobid – 6, 12; Cone – 5, 1, Sphere – 0, 0
 Q3. Do it yourself
 Q4. (i) Sphere (ii) Cube (iii) Cylinder (iv) Cuboid
 (v) Triangular Pyramid (vi) Square Pyramid (vii) Triangular Prism (viii) Cone
 Q5. Do it yourself

Exercise 11.1

- Q2. (i) 495 m (ii) 240 m Q3. 440 m
 Q4. (i) 46 cm (ii) 15 cm (iii) 50cm

Exercise 11.2

- Q1. 5 m Q2. 120 m Q3.(i) 120 m (ii) 43.8 cm (iii) 22.1 m
 Q4. ₹ 525 Q5. 1500 m Q6. ₹ 20,000 Q7. 1290 m
 Q8. 840 m Q9. 15 cm Q10. 39 cm Q11. 48 m
 Q12. 18cm
 Q13. (i) 8 cm (ii) 6 cm (iii) 4 cm
 Q14 (i)28 m (ii) 52m (iii) 1/14 cm
 Q15. Tony Q16. ₹1200
 Q17. (i) 120 cm (ii) 120 cm (iii) 120 cm
 Q18. 300 m

Exercise 11.3

- Q1. (i) 36 sq.cm (ii) 34 sq. cm (iii) 28 sq.cm (iv) 20 sq.cm
 (v) 27 sq. m (vi) 9 sq. units (vii) 5 sq. units (viii) 4 sq.units
 (ix)8 sq. units (x) 10 sq.units (xi) 4 sq. units (xii) 6 sq. units
 (xiii) 5 sq. units (xiv) 9 sq. units (xv) 4 sq. units (xvi) 5 sq. units
 (xvii) 8 sq. units

Exercise 11.4

- Q1. (i) 800 sq. cm (ii) 600 sq. m (iii) 116 sq. cm (iv) 337.5 sq. m
 Q2. (i) 1849 sq. cm (ii) 31.36 sq. cm (iii) 3969 sq.mm (iv) 6.76 sq. cm
 Q3. 2.50 sq. m Q4. 6 m Q5. 15 sq. m Q6. 5m
 Q7. 48 tiles Q8. 7.5m

Q9. 10000 sqm

Q10. 96 tiles

CHAPTER ► 12

Exercise 12.1

Q1. Do yourself

Q2. Do yourself

Q3. Note book, bag, black board and plate.

Q4. Do yourself

Q5. Do yourself

Exercise 12.2

Q1. Do yourself

Q2. G, J, P, Z, S, N

Q3. to 7 Do yourself

Q8. Square–3 Rectangle–2, Isosceles triangle–one number, Rhombus

Exercise 12.3

Do it yourself

CHAPTER ► 13

Exercise 13.1

Q1. Do yourself

Q2. Do yourself

Q3. Do yourself

Q4. Do yourself

Q5. (i) Passes through (ii) half (iii) Chord (iv) arc (v) Part of circle.

Exercise 13.2

Do yourself

Exercise 13.3

Do yourself

Exercise 13.4

Do yourself

Exercise 13.5

Q1. Do yourself

Q2. Do yourself

Q3. and Q4. Do yourself

Q5. (i) Passes through (ii) half (iii) Chord (iv) arc (v) Part of circle

Exercise 13.6

- Q1. (i) 180° (ii) 15° (iii) 10° (iv) 75°
Q2. to 7 Do yourself

CHAPTER ► 14

Exercise 14.1

- Q1. (i) maximum number = 6 (ii) minimum number = 8
Q2. (i) ₹ 80 (ii) ₹ 35 (iii) ₹ 10
Q4.

Disc Outcome	Tally	No. of Outcome
1		4
2		7
3		9
4		7
5		2
6		1

- Q3, 4, 5, 6 Do Your Self

Exercise 14.2

- Q1. (i) Third 60 (ii) Fourth 20 (iii) 40 (iv) 170
Q2. (i) Village D (ii) Village C (iii) 3 (iv) 28
Q3. (i) 24 (ii) 30 (iii) 126 (iv) Thursday
Q4. Do it yourself
Q5. (i) 50 people (ii) 60
Q6. (i) Martin (ii) 700 (iii) Anwar, Martin, Ranjit Singh
Q7. (I) Class V (ii) Class VIII (iii) 200 books (iv) 200 books
Q8. to 14 do your self

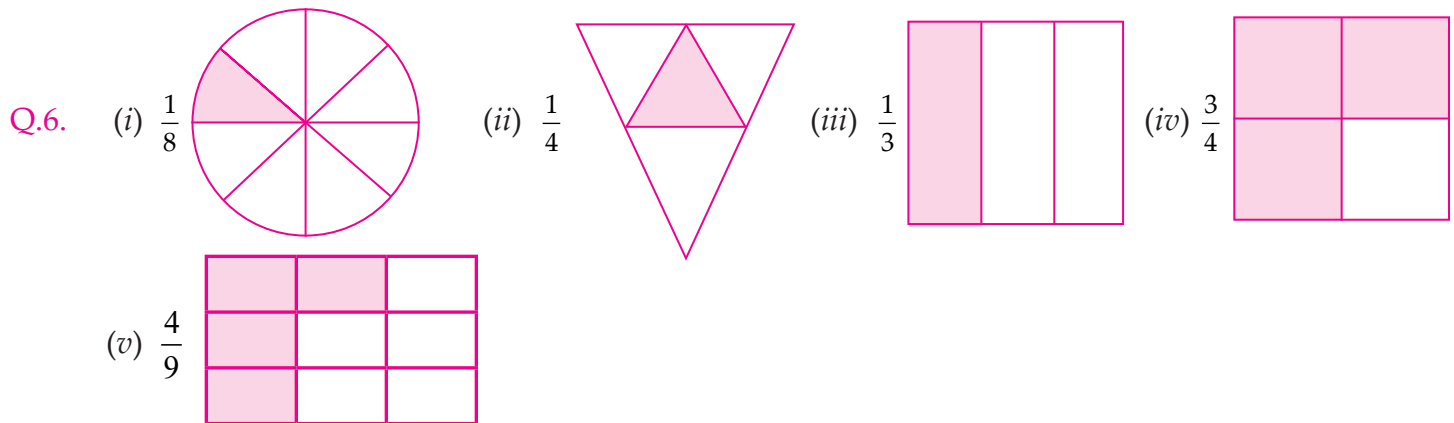
Exercise 14.3

- Q1. (i) 500 (ii) Japan (iii) India (iv) None (v) 1100
Q2. (i) 2002 (ii) 1998

- Q3. (i) January (ii) January (iii) 60 cm (iv) November
- Q4. (i) Number of children in various families
(ii) 2 children – 60, 3 children – 40 and 5 children – 20 families (iii) 0
(iv) $\frac{10}{150} \times 100 = 6\frac{2}{3}\%$
- Q5. (i) Train has maximum speed, that is 50 km/hr.
(ii) Cycle has minimum speed, that is 5 km/hr.
(iii) 25 km/hr (iv) Scooter
- Q6. (i) The given bar graph shows the mode of transport used by students.
(ii) Maximum number of student use bicycle for going to school.
(iii) 14 students (iv) 37 students
- Q7. (a) This bar graph shows the marks obtained by Aziz in different subjects.
(b) Hindi (c) Social studies
- Q8. to Q 15 Do it yourself

PRACTICE PAPER ► 1

- Q.1. (i) 2,2000 (ii) 8,80 (iii) 8,800000 (iv) 1,1000
(v) 9,9000000
- Q.2. (i) 4,321,716 Four million three hundred twenty one thousand seven hundred sixteen.
(ii) 5,030,469 Five million thirty thousand four hundred sixty nine.
(iii) 40,050,017 Forty million fifty thousand seventeen.
(iv) 78,921,092 Seventy eight million, nine hundred twenty one thousand ninety two.
(v) 7,452,283 Seven million Four hundred fifty two thousand two hundred eight three.
(vi) 99,985,102 Ninety nine million nine hundred eighty five thousand one hundred two.
- Q.3. (i) 0 (ii) 7680 (iii) 374 (iv) 91
(v) 5 (vi) $(36 + 4)$
- Q.4. (i) $\rightarrow b$ (ii) $\rightarrow d$ (iii) $\rightarrow a$ (iv) $\rightarrow c$
- Q.5. 116



Q.7. (i) Yes (ii) No (iii) No (iv) Yes (v) Yes

Q.8. (i) 63.245 (ii) 60.262 (iii) 40.065 (iv) 32.588
 (v) 497.46 (vi) 110.416

Q.9. (i) The product of y and 3 added to 3
 (ii) The product of 5 and y subtracted from the product of 42 and x .

Q.10. (i) 24 (ii) 9 (iii) 36 (iv) -1

PRACTICE PAPER ▶ 2

Q.1. (i) 1 : 4 (ii) 10 : 1 (iii) 3 : 1 (iv) 100 : 7

Q.2. (i) 9 (ii) 24 (iii) 6 (iv) 2
 (v) 105 (vi) 18

Q.3. (i) PR, PQ, RS, QS (ii) PA, QC, RB, SD (iii) PR and QS

Q.4. (i) F (ii) F (iii) T (iv) F (v) T

Q.5. Do yourself

Q.6. (i) Pentagon (ii) Six (iii) Quadrilateral (iv) Right angles

Q.7. (i) 8 cm (ii) 6 cm (iii) 4 cm (iv) 4 cm

Q.8. Do yourself

Q.9. (a) Passes through (b) half (c) chord
 (d) arc (e) part of circle

Q.10. (i) 500 (ii) Japan (iii) India
 (iv) None (v) 1100

