

Chapter -4

Exponents

Ex- 4.1 and 4.2

- 1.a. 7^{11} b. 3^5 c. 2^{-7} d. $(5/6)^9$ e. 3^{-23} f. 2^{-9}
g. 6^{13} h. 10^8 i. 7^6 j. 4^{-9} k. 2^{32} l. 6^{-15}
2. 10^2

For curious mind :

1. 3^4 2. 364^2 3. 2^7 4. 13^3 5. $7^2 \times 8^3$ 6. 49
7. $10 \times 10 \times 10 \times 10$ 8. $6 \times 6 \times 6 \times 6 \times 6 \times 6$ 9. 3×3 10. $7 \times 7 \times 7$ 11. $12 \times 12 \times 12 \times 12$
12. $5 \times 5 \times 5$

Chapter -5

Sets

Ex-5.1

1. a. $X = \{ 11, 12, 13, 14, 15, 16, 17, 18, 19 \}$ b. $Y = \{ -5, 0, 5 \}$
a. $B = \{ \text{April, June, Sep, Nov} \}$
2. a. set of all first four months in a year.
b. $C = \{ x | x \text{ is a prime numbers } 10 < x < 20 \}$
c. Set of numbers which is neither prime nor composite.
3. a. $n(G) = 6$ b. $n(E) = 0$

Ex-5.2 & 5.3

1. a. not equal and not equivalent
b. Equal and equivalent
2. a. empty b. singleton c. neither empty nor singleton.
3. a. $\{ 1, 3, 5, 15 \}$ – finite b. infinite

4.i. overlapping

ii. disjoint

5. i) $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

ii) $U = \{0, 1, 8, 9\}$

For curious mind

1. infinite 2. finite 3. Infinite 4. Finite 5.null 6. Finite 7. Null 8. Infinite 9. Finite

Match

- 1) A well defined collection of distinct objects.
- 2) A set whose members can be counted
- 3) A set with members that cannot be counted
- 4) Sets that have an equal number of members.
- 5) A set whose elements are all part of the elements of a bigger set.
- 6) If a set has no elements
- 7) A set with identical members.
- 8) Sets that have no members in common .
- 9) The objects of a set.

Set builder form

1. $\{x|x \text{ is even no } 0 < x < 12\}$
2. Set of first five prime numbers
3. $\{x|x \text{ is a month starts with j letter}\}$
4. $\{x|x \text{ is a vowel}\}$
5. $\{x|x \text{ is a days starts with T letter}\}$
6. Set of first 5 square numbers
7. Set of first 6 multiples of 5

Chapter -6

Ratio and proportion

Ex-6.1

1. a. 1:5 b. 7:3 c. 69:92
2. 8 3.2 4.25 5.4/7 6.2:3

Ex-6.2 & 6.3

1. a.45 b.12 2. i)12 ii)6 3.90,153,72
4.57

For curious mind

1. 8 2. 25 3. 11 4. 2 5. 6

Word problem :

1. 2 2. 24 3.30 4. 6 5. 225

6. 16 7. 24

Unitary method :

1. 280 2. 130 3. 80 4. 56 5.220

Chapter -7**Percentage****Ex-7.1 &7.2**

1. 10% 2.65% 3.40% 4.44% 5.46% 6. 50%

7.45% 8.72% 9.70% 10.48% 11. 75% 12.2%

13.80% 14.26% 15.15% 16.96% 17.95% 18.14%

Convert percentage to fraction:

2. $\frac{2}{5}$ 3. $\frac{7}{50}$ 4. $\frac{1}{4}$ 5. $\frac{3}{10}$ 6. $\frac{37}{100}$ 7. $\frac{33}{50}$

8. $\frac{41}{50}$ 9. $\frac{1}{2}$ 10. $\frac{13}{50}$ 11. $\frac{3}{4}$ 12. $\frac{6}{25}$ 13. $\frac{7}{10}$

14. $\frac{89}{100}$ 15. $\frac{37}{50}$ 16. $\frac{6}{5}$ 17. $\frac{11}{20}$ 18. $\frac{71}{50}$ 19. $\frac{3}{2}$

20. $\frac{27}{50}$

Convert percentage to fraction and decimals:

Percent	Decimal	Fraction
40%	0.4	$\frac{4}{10}$
90%	0.9	$\frac{9}{10}$
55%	0.55	$\frac{55}{100}$
28%	0.28	$\frac{7}{25}$
50%	0.5	$\frac{1}{2}$
15%	0.15	$\frac{3}{20}$
82%	0.82	$\frac{41}{50}$
95%	0.95	$\frac{19}{20}$
2%	0.02	$\frac{1}{50}$

Increased or decreased percentage:

1. 175/12% 2.34.60% 3.500/57% 4.11/3% 5.320/13%

For curious mind:

1. 264 2.858 3.99 4.570 5.288
 6.72 7.2730 8.26.25

Fractions	Decimals	Percents
50/100	0.5	50%
6/100	0.06	6%
8/100	0.08	8%
16/100	0.16	16%
61/100	0.61	61%

Chapter -8
Profit and loss

1.

Profit / loss	Amount
Loss	500
Profit	1730
Profit	130
Profit	3200
Loss	68.51
Loss	49.50
profit	24.45

2.

Profit	loss	% profit	% loss
300		15%	
	300		15%
300		1.5%	
	3000		15%
125		8.33%	

Sale price	Profit	loss	% profit	% loss
1050	50		5%	
1150	150		15%	
1113.7	113.7		11.37%	
850		150		15%

3. calculating selling price:

1. 3328.56 2.7980.46 3.4847.77 4.6576.15 5.6410.75
6.25197.56

4.1.Profit= 5 2.loss=2 3. Profit =1.50

For curious mind :

1.20 2.1137 3.3136 4.2909503 6.15500

Chapter -9

Simple interest

Ex- 9.1

I.1.54 2.1188 3.3500 4.14000 5.2250 6.126 7.2000

8.200 9.12000 10.2700

2. 15580 3.1704 4.2000 5.2.1% 6.2.5 7.2940

For curious mind :

1.125 2.4050,15400 3.2.5 4.1.34% 5.48.75

6.300,2300 7.2.5 8.2.02% 9.3750

Chapter -10

Speed , distance and time

Ex-10.1,10.2,10.3

1. 71km/hr 2.1760km 3.9.1 hrs 4.110km/hr 5.11.4 6.3.75

7.15 sec 8.12.5 9.360 10.16sec 11.14sec 12.4

13.10 14.21 15.5 16.5/4 hrs

For curious mind:

1.18km 2.30km 3.20 min 4.15km/hr 5.45 km/hr 6.7 km

7. 12km 8.40km/hr