Number and Quantity Part 1

Section - 1

Practice :- 1
(Lesson 1)

A. 1,436,879

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

B. Round off :-

8) 500
9) 80
10) 1100
11) 12000
12) 2000
13) 80

C.
14) 100
15) 341
16) 1145
17) 125,391

D. least to greatest

18) 18, 23, 39, 45
19) 89, 91, 109, 111
20) 909, 932, 1087, 1139
21) 1420, 1425, 1429, 1432
22) 11,098, 12071, 12,131
22) 15,298, 15,309, 15,356

E. Best answer :-

24) option C. 50, 48, 45, 40
23) option D. 1,540,000

Lesson:-2 :- Whole number operation :-

Practice 2.1 :-

A Solve:-

1) 77
2) 100
3) 52
4) 36
5) 190
6) 4,078
7) 43
8) 2,117

B. Solve:-

9) 65
10) 114
11) 180
12) 293
13) 483
14) 456
15) ~~171~~ 2419
16) 900
17) 11,308
18) 14,908
19) 131,97
20) 30,899

C. Best Answer:-

21) B. 88
22) C. $13

Practice 2.2 :-

A. Solve:-

1) 484
2) 1,000
3) 2,536

4)
$$\begin{array}{r} 13 \\ 5\overline{)65} \\ -5 \\ \hline 15 \\ 15 \\ \hline 0 \end{array}$$

$\boxed{\text{remainder} = 0 \quad q = 13}$

5)
$$\begin{array}{r} 105 \\ 7\overline{)735} \\ 7 \\ \hline 35 \\ 35 \\ \hline 0 \end{array}$$

$\boxed{\text{remainder} = 0 \quad q = 105}$

6) $9\overline{)189}$ = 21

18

9

9

0

$r = 0$
$q = 21$

7) 45×30

00

135 +

$\boxed{1350}$

8) 105×25

525

30 +

$\boxed{825}$

9) 211×16

1266

211 +

$\boxed{3376}$

10) $10\overline{)280}$ = 28

20

80

80

0

$q = 28$
$r = 0$

11) $15\overline{)225}$ = 15

15

75

75

0

$r = 0$
$q = 15$

12) $19\overline{)114}$ = 6

114

0

$r = 0$
$q = 6$

13. Solve:-

13) $50 \times 5 = 250$

14) $179 \div 4 =$

$4\overline{)179}$ = 44

16

19

16

3

$r = 3$
$q = 44$

15) $5 \times 6 \times 10 = 300$

16 $1004 \div 5$

$5\overline{)1004}$ = 200

1000

4

$r = 4$
$q = 200$

17) $25 \times 3 \times 2 = \boxed{150}$

18) $7452 \times 9 = \boxed{67,068}$

19) $10760 \div 20$

```
      538
20)10760
   100
    76
    60
    160
    160
      0
```

$\boxed{r = 0 \quad q = 538}$

20) $12 \times 8 \times 4 = \boxed{384}$

21) $144,140 \div 12$

```
      12011
12)144140
   144
     14
     12
      20
      12
       8
```

$\boxed{r = 8 \quad q = 12014}$

C. One best Answer :-

22) $16 \times 6 = 96$

option $\boxed{D. 96}$

23) $15 \times 5 = 75$

option $\boxed{c. \$75}$

24) $\frac{12}{26} = 6$

option $\boxed{B. 6}$

Lesson-3 The Number line & Signed Number

Practice 3.1

A. Solve:

1) $8-3=5$
2) $50-5=45$
3) $11+2=13$
4) $-1+2=1$
5) $-4+5=1$
6) $8+2=10$
7) $6-9=-3$
8) $2+11=13$
9) $-7+3=-5$
10) $-4+6=2$
11) $-15-7=-22$
12) $36-4=32$
13) $-60+10=-50$
14) $-5-6=-11$
15) $12+13=25$
16) $-55+20=-35$
17) $7-3-5-10=-11$
18) $66-22-33=11$
19) $-14+6+18=10$
20) $80+15-20=75$
21) $6+3-5+8=12$
22) ~~23+9~~ $-23-11+15+21=2$
23) $3+9-5+12-9-11=-1$
24) $-7-20+14=-13$

B. Best answer:-

25) option $\boxed{\text{B. } 2+(-5)}$

26) $92+12-5+6-3+13$

option $\boxed{\text{C. } 115^\circ}$

Practice - 3.2 :-

A. Solve.

1) $5 \times 4 = 20$

2) $7(-3) = -21$

3) $-8 \times 6 = -48$

4) $-2 \times -9 = 18$

5) $-10 \times 1 = -10$

6) $9 \div 3 = 3$

7) $12 \div -4 = -3$

8) $-18 \div -9 = 2$

10) $\frac{40}{-8} = -5$

11) $14 \times -2 = -38$

12) $-75 \div 25 = -3$

13) $13 \div -13 = -1$

14) $-5 \times 15 = -75$

15) $\frac{18}{3} = 6$

B. solve

16) $\frac{\cancel{25}^{5} \times 4}{-\cancel{5}_{1}} = -20$

17) $-3 \times -5 \times 2 \times -10 = -300$

18) $20 \div (-5) \div (-2) = +2$

19) $\frac{30}{-6} = -5$

20) $-11 \times 2 \times -5 \times 6 = 660$

21) $12 \times -2 \div -2$

$-24 \div -2$

$= \boxed{12}$

22) $-4 \times -6 \times -5 = -120$

23.) $50 \div 2 \times -5 = -5$

24) $-2 \times -6 \times -1 = -12$

25) $\frac{+\cancel{3} \times \cancel{8} \times 5}{+\cancel{6}} = 20$

26) $\frac{\cancel{4} \times -\cancel{4}}{-\cancel{8} \times -\cancel{2}} = -1$

27) $-5 \times -2 \times 0 \times -1 = 0$

C. one best answer :-

28) $\frac{A1 \times C1 \times A3}{(B3 \times A3)} = \frac{-\cancel{8} \times 7 \times -\cancel{1}}{\cancel{8} \times -\cancel{1}} = \boxed{-7}$

29) $(2 \times 8)/-8$ option $\boxed{C.\ 2(8)/(-8)}$

30) $52 \times -103 \times -45 \times -8 \times 3$ $\boxed{\text{option C. B}}$

LESSON - 4 Order of operations

Practice 4 :-

A. Solve :-

1) $12 - 2 + (6 + 8)$

$= \boxed{24}$

2) $16 \div 4^2$

$16 \div 16 = \boxed{1}$

3) $25 + 2 \times 2$

$\boxed{29}$

4) $-9 + 11 = \boxed{2}$

5) $\frac{\cancel{3}^{1} \times 3 \times 3}{\cancel{3}_{1}} - \frac{\cancel{4}^{2}}{\cancel{2}_{1}}$

$9 - 2 = \boxed{7}$

6) $\frac{\cancel{25}^{5}}{\cancel{5}_{1}} \times 3 + 5$

$15 + 5 = \boxed{20}$

7) $8 + 9 - 3 = \boxed{14}$

8) $-8 \times -6 + 7$

$\boxed{55}$

9) $30 \div 3 = \boxed{10}$

10) $15 + 12 - 4$

$\boxed{23}$

11) $36 + 5 \times 5 \times 5$

$\boxed{161}$

12) $49 \div 7 + 23$

$7 \div 23$

$= \boxed{30}$

13) $2\left[36 \times \frac{\cancel{10}^{5}}{\cancel{2}_{1}}\right]$

$= \boxed{360}$

14) $(25 + 6 - 3) \div \cancel{49}\ (16 - 9)$

$28 \div 7$

$\boxed{4}$

15) $150 - 4\left[\frac{12}{\cancel{3}_{1}} \times \cancel{9}^{3}\right]$

$150 - 4(36)$

$150 - 144 = \boxed{+6}$

B. Choose the one best answer:-

16) option $\boxed{B}$

$28 \times 30 - 0.75 \times 30$

17) $5 + 2\left[7\left(\frac{100}{10}\right) + 12\right]$

$5 + 2[70 + 12]$

$5 + 164$

option $\boxed{B.\ Adds}$

18) $22 + 6[9 \div 3 \times 3]$

$22 + 6[9 \div 9]$

$22 + 6$

$= 28$

option $\boxed{B.\ 28}$

LESSON -5 Absolute Value

Practice 5 :-

A. absolue value :- 91 - 6.

1) 18
2) 107
3) 423
4) 95
5) 7029
6) 18

B. 913 - 20 :-

13) 5+6 = 11
14) -3×52 = -156
15) 3×52 = 156
16) 12÷4 = 3
17) $-|-91| = -91$
18) -14+14 = 0
19) 706.2 − 86.6 = 619.6
20) 49 ÷ -7 = -7

C. Choose the one best answer:-

25) option D. 10 degree

26) option D. 16

27) option C. 120

28) option A. 1.5

LESSON-7 Powers and Roots

Practice 7 :-

A. Solve each expression:-

1) 9
2) 4
3) 3
4) 0
5) 9
6) 7
7) 125
8) $\frac{1}{4^2} = \frac{1}{16} = \frac{1}{16} = 0.0625$

B. Round nearest tenth. :-

9) $3^8 = 6561 = \boxed{6560}$

10) $(-6)^4 = 1296 = 1300$

11) $\sqrt{150} = 12.247 = \boxed{12.2}$

12) $20^3 = \boxed{8000}$

13) $1^{15} = \boxed{1}$

14) $1/16 = 0.062 = \boxed{0.100}$

15) $\sqrt{242} = 15.55 = \boxed{15.6}$

16) $10.89 = \boxed{10.9}$

17) $\sqrt{57} = 7.54 = \boxed{7.5}$

18) $\sqrt{536} = 23.15 = \boxed{23.2}$

19) $112^0 = \boxed{1}$

20) $(-2)^8 = 256 = \boxed{260}$

c) Choose the one best answer:-

21) option $\boxed{C)\ 6^3}$

22) option A. $\boxed{3^{-3}}$

LESSON - 8 Scientific Notation

A. Practice - 8 :-

A. Solve Scientific notation:-

1) 23×10^{2}
2) 4.2×10^{-4}
3) 124×10^{5}
4) 1432×10^{7}
6) 9.5×10^{-3}

5) $36,000,000 = 36 \times 10^{6}$
6) 9.5×10^{-3}
7) 5.8×10^{-7}
8) 15×10^{10}
9) $9. \times 10^{-9}$

B) Convert from Scientific notation to std notation:-

10) 0.0005173
11) 3700000
12) 480000000
13) 0.00001.7

14) 0.0072
15) 916000
16) 85910000
17) 0.00000956

c) Answer the following questions:-

18) 235×10^{2} miles
19) 1×10^{-9} sec = 0.000000001 sec
20) 2.67×10^{9} M = 267.0000000 miles
21) 300000000 = 3×10^{8} Meter per second

D. Choose the one best Answer:-

22). option B $\boxed{4.356 \times 10^4}$

23). 1 ton = ~~20~~ 0.907

5 = ?

= 4.535

$\boxed{\text{option D}}$ $5 \times 9.07 \times 10^{-1}$

LESSON-9

Word Problems

Practice 9.1

A (Q4-7) :-

4) 450/5 = 90 day [option C] 90

5) 3 × 30 = 90 Min [option D] 90

6) 60 − 45 = $15 [option A] $15

7) 6 × 7 = 42 [option D] = 42

Practice 9.2

(Q1-4)

1) (2 × 17) + (3 × 23) = [option C] $103

2) [option B] $18

3) [option B] Restaurant B (4 × 22) + (1 + 15)

4) [option B] 50 (150 × 3) − 400 = 50

LESSON - 10

Distance and cost :-

Practice - 10 :-

A.

1) $d/t = r$

2) $d = rt$

Solve for: distance

formula = $d = rt$

3) $d/r = t$

solve for = time

formula = $d/r = t$

4) solve for : Price per unit

formula :- $\frac{c}{n} = r$

5) Solve for: Cost

formula : $c = nr$

6) Solve for: numer of units

formula : $\frac{c}{r} = n$

B. Solve the Problems:-

7) $c = 4 \times 12$ $\therefore c = nr$

total cost = $\boxed{48}$

8) total cost = 12×3 $\therefore c = nr$

total cost = $\boxed{36}$

9) $\therefore r = c/n$

Price per unit = $320/4$

$= \boxed{80}$

10) $n = c/r$

no of tickets = $25/5$ = $\boxed{5}$

11) $r = c/n$

Pay per ticket = $\$20/10$ = $\boxed{\$2}$

12) $d = rt$

$d = 60 \times 3$

$d = 180$ miles per hours

13) $d = rt$

$d = 50 \times 4$

distance travel = $\boxed{200 \text{ miles per hour}}$

14) $t = d/r$

time = $\frac{25}{25}$ $\boxed{1 \text{ hour}}$

15) $r = \frac{d}{t}$

speed = $\frac{270}{3}$ = $\boxed{90 \text{ miles per hour}}$

16) $t = d/r$

$t = 75/25$

$\boxed{t = 3 \text{ hours}}$

Number and Quarility Part II :-

SECTION - 2 DECIMAL BASICS

LESSON :- 1 :—

Practice 1

A. Round all :-

1) 3.75
2) 6
3) 0.43
4) ~~0.67~~ 0.667
5) 8.1
6) 2.714

B. Which number is greater ?

7) 0.45
8) 0.08
9) 4.68
10) 1.85
11) 1.029
12) 0.14

C) least to greatest :-

13) 5.08 , 5.6 , 5.8 , 5.802
14) 0.1136 , 0.115 , 0.12 , 0.2
15) 4.52 , 4.667 , 4.8 , 14.005
16) 0.8 , 0.8023 , 0.803 , 0.823

D) choose one best answer :-

17) $\boxed{\text{option c}}$ 0.6g , 0.572g , 0.0785g

18) $\boxed{\text{option D}}$ $\boxed{1.38}$

LESSON-2 Decimal Operations

Practice 2.1

A solve question (1-12)

1) 7.996
2) 10.508
3) 12.26
4) 5.85
5) 7.426
6) 2.11
7) 18.094
8) 5.117
9) 21.32
10) 0.895
11) 3.84
12) 2.35

B. choose the one best answer:-
q (25 - 27)

25) 7.2 + 6.8 + 8.25
= 22.25 $\boxed{\text{option A}}$. 22.25

27) 6 - 2.8 - 1.4 = 1.8
$\boxed{\text{option A}}$ = 1.8

26) $\boxed{\text{option C}}$ 4.25

Practice 2.2

A. Solve question (1 - 12)

1) 2.65	7) 8.75
2) 12.8	8) 3.375
3) 0.496	9) 9.6681
4) 0.52	10) 24
5) 3.6	11) 14.2
6) 4.09	12) 15,800

B. chose one best answer:-

25) \$4.94/19 = $\boxed{\text{option C}}$ \$0.26

26) 4 × 12.5 = $\boxed{\text{option B}}$ 50.0

LESSON 3

Fraction Basics :-

Practice 3 :-

A. Fraction

1) $\frac{3}{5}$

2) $\frac{2}{4}$

3) $\frac{2}{3}$

B. Improper Fraction

4) $\frac{7}{3}$ 5) $\frac{7}{4}$ 6) $\frac{15}{4}$

C. Improve Fraction to mixed number (7 - 10)

7) $5\frac{2}{3}$ 8) $\frac{18}{5}$

9) 4 10) $\frac{47}{9}$

D. Equal fraction :- 9 (19-21)

19) $\frac{4}{5} = \frac{12}{60}$ 20) $\frac{3}{8} = \frac{5}{40}$ 21) $\frac{6}{25} = \frac{4}{100}$

$= \boxed{12}$ $\boxed{5}$ $= \boxed{4}$

E. question (25 - 26) :-

25) $\frac{\cancel{26}^{13}}{\cancel{30}_{15}} = \frac{13}{15}$

26) $\frac{\cancel{60}^{2}}{\cancel{90}_{3}} = \frac{2}{3}$

F. Choose the one best answer :-

27) $\frac{18}{24} = \frac{\cancel{9}}{\cancel{12}} = \frac{3}{4}$

option :- $\boxed{\text{A. } 3/4}$

28) $\boxed{\text{option C}}$ $\frac{40}{100}$

LESSON-4

Fraction Operations

Practice 4.1 :-

B. Choose best answer :-

26) $\frac{5}{16} + \frac{7}{8} = \frac{19}{16}$ $\quad 1\frac{3}{16}$

$\boxed{\text{option B}}$ $1\frac{3}{16}$

27) $2\frac{7}{8} - 1\frac{1}{4} = 1\frac{5}{8}$

$\boxed{\text{option C}}$ $1\frac{5}{8}$

28) $23\frac{1}{4} - 8\frac{7}{8} = 14\frac{3}{8}$

$\boxed{\text{option A}}$ $14\frac{3}{8}$

29) $1\frac{2}{3} + \frac{1}{2} + \frac{3}{4}$

$\frac{5}{3} + \frac{1}{2} + \frac{3}{4} = \frac{20+6+9}{12}$

$\boxed{\text{option C}}$ $2\frac{11}{12}$

Practice 4.2 :-

B. choose the one best answer:-

19.) $400 \times \frac{3}{16} = 75$ $\boxed{\text{option B}}$ $\underline{\underline{75}}$

20.) $\frac{20 \times 4}{11} = 7.25$ $\boxed{\text{option B} = 7}$

21.) $\frac{22 \times 3}{2} = 33$ $\boxed{\text{option B} = 33}$

22.) $\frac{303}{8} = 37\frac{7}{8}$

$\boxed{\text{option C}}$ $37\frac{7}{8}$ //

LESSON - 5

Fraction and Decimal Equivalencies :-

Practice - 5

1. $\$80 \times 0.25$

   $\boxed{\text{option B}}$ = \$20.00

2. $480 \times \frac{3}{10} = 480 \times 0.3$

   $\boxed{\text{option C}}$ = 480×0.3

3. $\frac{14}{3} = 4.66$

   $\boxed{\text{option B}}$ $4\frac{2}{3}$

4. $\$12 \times 1.5$

   $\boxed{\text{option C}}$ \$18.00

5. $1.875 - 1.125 = 0.75$

   $\boxed{\text{option B}}$ $= \frac{3}{4}$

LESSON - 6

Decimals and Fractions on the Number line:-

Practice 6:-

A. Choose best answer :-

1). $\boxed{\text{option c}}$ $= \frac{2}{3}$

2) $\boxed{\text{option D}}$ $= 2.8$

3) $\frac{7}{2} - \frac{3}{2} = \frac{\cancel{5}}{\cancel{2}}\ \frac{4}{2} = 2$

$\boxed{\text{option c}}$ 2

4) $\boxed{\frac{2}{3}}$

B. Decimal values :-

5) $\boxed{4.625}$

6) $\boxed{9.33}$

C. Write Fraction values of the points on the number lines :-

7) $3\frac{1}{3}$

8) $11\frac{5}{6}$

SECTION-3 Ratio and Proportion

Number and Quantity Part III

Practice 1.1 :- Lesson 1 :-

A. Ratios :- (qestion 1-5)

1) $\frac{24}{6} = \boxed{4:1}$

2) $\frac{\$25\cancel{0}}{\$150\cancel{0}} = \frac{5}{30}$ $\boxed{1:6}$

3) $\frac{\cancel{180}}{\cancel{15}} = \frac{\cancel{36}}{\cancel{3}}$ $\boxed{12:1}$

4) $\frac{\cancel{12}}{\cancel{18}} = \frac{2}{3}$ $\boxed{2:3}$

5) $\frac{\cancel{336}}{\cancel{14}} = \frac{\cancel{168}}{\cancel{7}} = \frac{24}{1} = \boxed{24:1}$

B. q 10 - 12 :-

10) $\boxed{\text{option A}}$ 9:11 $\frac{180}{220} = \frac{9}{11}$

11). $\frac{\cancel{180}^{3}}{\cancel{600}_{10}} = 3:10$ $\boxed{\text{option B}}$ 3 to 10

12) $\frac{150}{220+180+50} = \frac{\cancel{150}^{3}}{\cancel{450}_{9}} = \frac{3}{9} = \boxed{\frac{1}{3}, \text{ option B}}$

Practice 1.2 :-

A. 1-5 solve:-

1) $\frac{2}{3} = \frac{x}{18} = \frac{2 \times \cancel{18}^{6}}{\cancel{3}_{1}} = x = \boxed{x = 12}$

2) $\frac{3}{5} = \frac{27}{x} = x = \frac{5 \times \cancel{27}^{9}}{\cancel{3}_{1}} = \boxed{x = 45}$

3) $\frac{6}{5} = \frac{3}{x} = x = \frac{5 \times \cancel{3}^{1}}{\cancel{6}_{2}} = \boxed{x = \frac{5}{2} = 2.5}$

4) $\frac{4}{212} = \frac{7}{x} = x = \frac{\cancel{212}^{53} \times 7}{\cancel{4}_{1}} = \boxed{x = 371}$

B (Q 17 - 19):-

17) $\frac{0.98}{4} \times 5$ $\boxed{\text{option B} = \$1.23}$

18) $\frac{5}{8} = \frac{60}{?} = 96$ $\boxed{\text{option C} = 96}$

19) $\frac{414}{18} = 23$ $\boxed{\text{option B} = 23}$