

**CBSE Board
Class VI
Mathematics Term I
Sample Paper - 2**

1) The smallest three digit number having distinct digits is?

- (A) 123
- (B) 101
- (C) 102
- (D) 201

Sol. (C)

The three distinct smallest digits are 0, 1, and 2. To form a smallest number using these digits, we need to arrange them in ascending order, but by this we get 012, which results in a two-digit number. So, the smallest three digit having distinct digits is 102.

2) If $1*548$ is divisible by 3, then * can take the value?

- (A) 0
- (B) 7
- (C) 2
- (D) 8

Sol. (A)

We know that,

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

So, sum of the given digits = $1 + 5 + 4 + 8 = 18$

Since 18 is multiple of 3 the required digit is 0

3) The predecessor of 1 in whole numbers is?

- (A) 2
- (B) 0
- (C) -1

(D) None of these

Sol. (B)

Predecessor of 1 = $1 - 1 = 0$

4) What is the additive inverse of 6?

- (A) 6
- (B) 1
- (C) 0
- (D) -6

Sol. (D)

For every integer a there exists its opposite $-a$ such that $a + (-a) = 0$

Therefore, $-6 + 6 = 0$

5) If $\frac{1}{2} + \frac{1}{x} = 2$, then $x = ?$

- (A) $\frac{2}{5}$
- (B) $\frac{5}{2}$
- (C) $\frac{3}{2}$
- (D) $\frac{2}{3}$

Sol. (D)

$$\begin{aligned}\frac{1}{2} + \frac{1}{x} &= 2 \\ \frac{1}{x} &= 2 - \frac{1}{2} \\ \frac{1}{x} &= \frac{2 \times 2}{1 \times 2} - \frac{1 \times 1}{2 \times 1} && \text{(because LCM of 1, 2 is 2)} \\ \frac{1}{x} &= \frac{4}{2} - \frac{1}{2} \\ \frac{1}{x} &= \frac{4-1}{2}\end{aligned}$$

$$= \frac{1}{x} = \frac{3}{2}$$

$$= x = \frac{2}{3}$$

6) 25 liters and 25 ml is equal to ?

- (A) 25.25 liters
- (B) 25.250 liters
- (C) 25.0025 liters
- (D) 25.025 liters

Sol. (D)

We know that 1000 ml = 1 liter

Therefore, 1 ml = $\frac{1}{1000}$ = 0.001 liter

$$25\text{ml} = \frac{25}{1000} = 0.025 \text{ liter}$$

So, 25 liters and 25 ml

= 25 liters + 0.025 liter

=25.025 liters

7) Quotient of z by 6 is multiplied by y is written as?

- (A) $\frac{z}{6y}$
- (B) $\frac{6z}{y}$
- (C) $\frac{zy}{6}$
- (D) $\frac{6y}{z}$

Sol. (C)

We have,

Quotient of z by 6 = $\frac{z}{6}$

∴ Quotient of z by 6 = $\frac{z}{6}$

Quotient of z by 6 is multiplied by y = $\frac{z}{6} \times y$

$$= \frac{zy}{6}$$

8) Find the ration of: 200 grams to 4 kg?

- (A) 1 : 20
- (B) 10 : 20
- (C) 5 : 4
- (D) 10 : 2

Sol. (A)

200 grams to 4 kg = 200 gms : 4000 gms

We know that , 1 kg = 1000 gms

$$\therefore 4 \text{ kg} = 4000 \text{ gms}$$

$$= 200 \text{ gms} : 4000 \text{ gms}$$

$$= 1 : 20$$

9) What is the value of $(39) + (-46) + (-10) + (79)$?

- (A) 62
- (B) -62
- (C) +76
- (D) -76

Sol. (A)

We have,

$$(39) + (-46) + (-10) + (79)$$

$$=(39 + 79) + (-46 - 10)$$

$$=(118) + (-56)$$

$$= 118 - 56$$

$$=62$$

10) Find the breadth of the rectangle whose perimeter is 360 cm and whose length is 100 cm.

- (A) 90 cm
- (B) 36 cm
- (C) 45 cm
- (D) 80 cm

Sol. (D)

We have,

Perimeter = 360 cm and length = 100 cm

$$\therefore \text{Breadth} = \frac{1}{2} \text{perimeter} - \text{length}$$

$$\Rightarrow \text{Breadth} = \frac{1}{2} \times 360 \text{ cm} - 100 \text{ cm}$$

$$= 180 \text{ cm} - 100 \text{ cm} = 80 \text{ cm}$$

11) In a Mathematics test, the following marks were obtained by 40 students.

5, 7, 8, 9, 3, 2, 1, 6, 5, 8, 8, 5, 4, 7, 2, 6, 5, 4, 9, 1, 7, 3, 8, 9, 5, 4, 6, 7, 8, 3, 5, 4, 7, 8, 3, 2, 7, 9, 5, 9.

The number of students who obtained less than 4 marks is?

- (A) 10
- (B) 9
- (C) 8
- (D) 7

Sol. (B)

The number of students who obtained 1 mark = 2

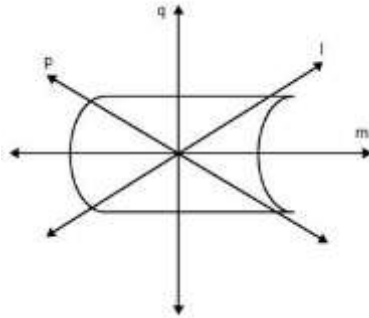
The number of students who obtained 2 marks = 3

The number of students who obtained 3 marks = 4

Thus, the number of students who obtained less than 4 marks = 2 + 3 + 4 = 9

Hence, 9 students obtained less than 4 marks.

12) In the figure below, the mirror line or the axis of symmetry is?



- (A) Line p
- (B) Line q
- (C) Line l
- (D) Line m

Sol. (D)

If the figure is folded along line m, then both the halves match exactly.

Hence, the mirror line or the axis of symmetry is line m.

13) A ____ is used to compare lengths.

- (A) Divider
- (B) compasses
- (C) ruler
- (D) protractor

Sol. (A)

A divider is used to compare lengths.

14) The supplementary angle of $\frac{1}{2}$ of 120° is?

- (A) 130°
- (B) 120°
- (C) 60°
- (D) 100°

Sol. (B)

We know that, the sum of supplementary angles is 180°

$$\begin{aligned}\text{Thus, the supplementary angle of } \frac{1}{2} \text{ of } 120^\circ &= 180^\circ - \frac{1}{2} \times 120^\circ \\ &= 180^\circ - 60^\circ \\ &= 120^\circ\end{aligned}$$

Hence, the measure of required angle is 120°

15) Determine the difference of the place value of two 8's in 578493087.

- (A) 7999920
- (B) 7989902
- (C) 7887980
- (D) 7999902

Sol. (A)

The 8 in the second place from the right is at ten's place

So, place value of 8 in ten's place = 80

The second 8 is in the 7th place from right.

So, it is at ten lakh's place.

$$\therefore \text{ place value of the other 8} = 8000000$$

$$\text{Hence, required difference} = 8000000 - 80 = 7999920$$

16) The smallest number which when diminished by 3 is divisible by 11, 28, 36, and 45 is

- (A) 1257
- (B) 1260
- (C) 1263
- (D) None of these

Sol. (D)

$$\begin{aligned}\text{Required smallest number} &= \text{LCM of } (11, 28, 36, 45) + 3 \\ &= 13,860 + 3 = 13863\end{aligned}$$

∴ None of these

17) Using distributivity of multiplication over addition of the whole numbers, find the product of 736×103 ?

- (A) 75808
- (B) 73600
- (C) 76300
- (D) 75880

Sol. (A)

We have,

$$= 736 \times (100 + 3)$$

(using distributivity of multiplication over addition of the whole number)

$$= (736 \times 100) + (736 \times 3)$$

$$= 73600 + 2208$$

$$= 75808$$

18) Find the value of : $-7 - 8 - (-25)$

- (A) 40
- (B) -10
- (C) -40
- (D) 10

Sol. (D)

We have,

$$= -7 - 8 - (-25)$$

$$= -15 + 25$$

$$= + (25 - 15) \quad = 10$$

19) A fraction equivalent to $\frac{45}{105}$ is?

(A) $\frac{6}{14}$

(B) $\frac{4}{7}$

(C) $\frac{5}{7}$

(D) $\frac{7}{5}$

Sol. (A)

On dividing the numerator and denominator by the HCF of 45 and 105, we get $\frac{45 \div 15}{105 \div 15}$

$$= \frac{3}{7}$$

$$\frac{3}{7} = \frac{3}{7} \times \frac{2}{2}$$

$$= \frac{6}{14}$$

20) $4\frac{7}{8}$ is equal to?

(A) 4.78

(B) 4.87

(C) 4.875

(D) None of these

Sol. (C)

$$4\frac{7}{8} = 4 + \frac{7}{8}$$

$$= 4 + \frac{7 \times 125}{8 \times 125}$$

$$= 4 + \frac{875}{1000}$$

$$= 4 + 0.875 = 4.875$$

21) The population of a certain species of insects is x now. It becomes y times itself after one week. What will be its population after 2 weeks?

- (A) y^2x
- (B) $2yx$
- (C) yx^2
- (D) $2 + xy$

Sol. (A)

Initial population of insects = x

Since the population of the insects becomes y times of itself after one week

\therefore Population of the insects after one week = $y \times$ (Initial population)

$$= y \times x$$

Population of the insects after two weeks = $y \times$ (population after one week)

$$= y \times (y \times x)$$

$$= y^2x$$

22) A worker is paid Rs 162.50 for 5 days. What should be paid to him for 28 days?

- (A) 950.50
- (B) 910.00
- (C) 710.50
- (D) 805.50

Sol. (B)

We have,

The payment for 5 days = 162.50

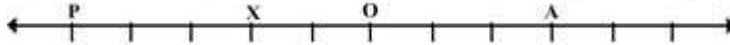
\therefore The payment for one day = Rs $\left(\frac{162.50}{5}\right)$

Hence, the payment for 28 days = Rs $\left(\frac{162.50}{5} \times 28\right)$

$$= \text{Rs } (32.50 \times 28)$$

$$= \text{Rs } 910.00$$

- 23) In the figure below, point O represents zero. Point X represents the temperature of Srinagar, point P represents of Shimla and point A represents the temperature of Nainital on the same day. Which place has the highest temperature?



- (A) Srinagar
- (B) Shimla
- (C) Nainital
- (D) None of these

Sol. (C)

Point A is to the right of all the points given on the number line.

So, point A will have the greatest value.

Therefore, Nainital has the highest temperature

- 24) A polygon having 3 sides is called a?

- (A) Pentagon
- (B) Rectangle
- (C) Square
- (D) Triangle

Sol. (D)

A polygon having 3 sides is called a triangle.

- 25) The fraction to be added to $6\frac{7}{15}$ to get $8\frac{1}{5}$ is equal to?

- (A) $\frac{11}{15}$
- (B) $1\frac{11}{15}$
- (C) $\frac{44}{3}$
- (D) $\frac{3}{44}$

Sol. (B)

Let the fraction to be added is x

$$6\frac{7}{15} + x = 8\frac{1}{5}$$

$$= \frac{15 \times 6 + 7}{15} + x = \frac{8 \times 5 + 1}{5}$$

$$\frac{97}{15} + x = \frac{41}{5}$$

$$\Rightarrow x = \frac{41}{5} - \frac{97}{15}$$

$$\Rightarrow x = \frac{41 \times 3}{5 \times 3} - \frac{97 \times 1}{15 \times 1}$$

$$\Rightarrow x = \frac{123}{15} - \frac{97}{15}$$

$$\Rightarrow x = \frac{123 - 97}{15}$$

$$\Rightarrow x = \frac{26}{15}$$

$$\Rightarrow x = \frac{15 + 11}{15}$$

$$\Rightarrow x = \frac{15}{15} + \frac{11}{15}$$

$$\Rightarrow x = 1\frac{11}{15}$$

26) The decimal form of five hundreds three tens two ones and eight tenths is?

- (A) 532.8
- (B) 523.8
- (C) 502.8
- (D) 538.8

Sol. (A)

Five hundred = 5 x 100

$$= 500$$

Three tens = 3 x 10

$$= 30$$

Two ones = 2 x 1

$$= 2$$

$$\text{Eight tenths} = \frac{8}{10}$$

$$= 0.8$$

$$\text{Five hundred three tens two ones and eight tenths} = 500 + 30 + 2 + 0.8$$

$$= 532.8$$

Hence, the decimal form of five hundreds three tens two ones and eight tenths is 532.8.

27) A toy is placed in front of a mirror at a distance of 80 cm from it, then the reflected image is formed at a distance of ____ cm from the mirror?

- (A) 40
- (B) 80
- (C) 100
- (D) 160

Sol. (B)

Given, a toy is placed in front of a mirror at a distance of 80 cm from it.

We know that

An object and its reflected image are symmetrical with reference to the mirror line.

Hence, the reflected image of the toy will be formed at a distance of 80 cm from the mirror

28) In a city there are two shops which sell groceries. The sales per month of the first shop are Rs 38,000 and that of the second shop are Rs 27,000. The total annual sales of both the shops are?

- (A) 78000
- (B) 65000
- (C) 780000
- (D) 650000

Sol. (C)

The sale per month of the first shop is Rs 38,000.

The sale per month of the second shop is Rs 27,000.

The total sales per month of both shops = Rs 38,000 + Rs 27,000
= Rs 65,000

The total annual sales of both shops = Rs 65,000 x 12 (∵ 1 year = 12 months)
= Rs 7, 80,000

Hence, the total annual sales of both the shops is Rs 7, 80,000

29) The product of three consecutive numbers is always divisible by?

- (A) 6
- (B) 7
- (C) 8
- (D) 10

Sol. (A)

Consider three consecutive numbers 1, 2 and 3.

Their product = $1 \times 2 \times 3$
= 6, which is divisible by 6

Now, consider another set of three consecutive numbers 8, 9 and 10.

Their product = $8 \times 9 \times 10$
= 720, which is divisible by 6

Hence, the product of three consecutive numbers is always divisible by 6.

30) Kirti and Tina go for a morning walk. Kirti goes around a rectangular field of length 275 m and breadth 125 m. Tina goes around a square field of side 225 m. The correct statement among the following is?

- (A) Both Kirti and Tina cover equal distance in each round.
- (B) Kirti covers 100 m more distance than Tina in each round.
- (C) Tina covers 100 m more distance than Kirti in each round.
- (D) Tina covers 50 m more distance than Kirti in each round.

Sol. (C)

Given, length of the rectangular field = 275 cm

Breadth of the rectangular field = 125 m

Side of the square field = 225 m

Distance covered by Kirti in one round = Perimeter of the rectangular field

$$= 2 \times (\text{Length} + \text{Breadth})$$

$$= 2 \times (275 + 125)$$

$$= 2 \times 400$$

$$= 800 \text{ m}$$

Distance covered by Tina in one round = Perimeter of the square field

$$= 4 \times \text{side}$$

$$= 4 \times 225 \text{ m}$$

$$= 900 \text{ m}$$

The difference of distances covered by Tina and Kirti = $900 - 800 = 100 \text{ m}$

Hence, in each round, Tina covers 100 m more distance than Kirti.