

STD – 6th Maths
Part – A

Q:1 MCQs.

[40]

- (1) $51/85$ in lowest terms is _____.
(a) $3/17$ (b) $7/5$ (c) **$3/5$** (d) $13/15$
- (2) $(1/2) + (1/2) + (1/2)$ is equal to
(a) $3/6$ (b) **$3/2$** (c) $1/8$ (d) $1/6$
- (3) Among 2.1, 2.01, 2.101, 2.11 which is largest ?
(a) **2.11** (b) 2.101 (c) 2.01 (d) 2.1
- (4) $0.7 + 7.7 + 0.007 + 0.07$ is equal to
(a) 7.777 (b) **8.477** (c) 7.707 (d) 8.747
- (5) 3 kg 5 g is equal to
(a) 3.5 kg (b) 3.05 kg (c) **3.005 kg** (d) 5.3 kg
- (6) What is the fraction of : two-third
(a) **$2/3$** (b) $3/2$ (c) $1/2$ (d) $1/3$
- (7) What shape is a gas cylinder ?
(a) Cone (b) Sphere (c) **Cylinder** (d) Cuboid
- (8) you have 12 toffees. You gave half of these to me. How many toffees did you give ?
(a) **6 toffees** (b) 12 toffees (c) 10 toffees (d) 18 toffees
- (9) For what value of x, $5x + 10 = 15$?
(a) **1** (b) 2 (c) 4 (d) 3
- (10) Write the fraction of : Numerator = 3, Denominator = 11
(a) $1/3$ (b) $11/3$ (c) **$3/11$** (d) $1/11$
- (11) A data which written in ascending or descending order is called _____.
(a) Raw data (b) Data (c) **Arrayed data** (d) Error data
- (12) Arrange in Ascending order : $8/9$, $8/13$, $8/5$, $8/11$, $8/15$
(a) $8/15$, $8/11$, $8/13$, $8/5$, $8/9$ (b) $8/9$, $8/13$, $8/5$, $8/11$, $8/15$
(c) $8/5$, $8/9$, $8/11$, $8/13$, $8/15$ (d) **$8/15$, $8/13$, $8/11$, $8/9$, $8/5$**
- (13) A number which when multiplied by 3 yield 42. The number is
(a) 16 (b) 15 (c) **14** (d) 18
- (14) Choose the pair of like fraction from the following.
(a) **$3/8$, $5/8$** (b) $3/8$, $8/5$ (c) $1/2$, $3/5$ (d) $3/2$, $2/3$
- (15) Perimeter of a rectangle is _____.
(a) **$2(l+b)$** (b) side * side (c) $l * b$ (d) 4l
- (16) The number of decimal places in $3.25 =$ _____.
(a) 1 (b) 3 (c) **2** (d) 0
- (17) A ratio equivalent to 3 : 7 is
(a) 9 : 14 (b) 6 : 18 (c) 15 : 90 (d) **9 : 21**
- (18) Choose the pair of unlike fraction from the following.
(a) **$7/9$, $4/7$** (b) $1/2$, $7/2$ (c) $3/5$, $2/5$ (d) $1/8$, $3/8$
- (19) Perimeter of a square is _____.
(a) side * side (b) $l * b$ (c) $2(l+b)$ (d) **4l**
- (20) Rewrite in ascending order : 1.2, 0.8, 1.08, 1.208
(a) 1.208, 1.2, 1.08, 0.8 (b) **0.8, 1.08, 1.2, 1.208**
(c) 0.8, 1.2, 1.08, 1.208 (d) 1.2, 1.208, 0.8, 1.08
- (21) If $9 : 15 :: x : 25$, then value of x is
(a) 20 (b) 25 (c) **15** (d) 30
- (22) Find the sum of : 0.82 m + 13.45 m
(a) 13,127 m (b) 0.82 m (c) **14.27 m** (d) 13.45 m
- (23) Area of a square is
(a) 4l (b) $l * b$ (c) $2(l+b)$ (d) **side * side**

- (24) Convert $\frac{6}{4}$ into decimal.
 (a) 0 (b) 4 (c) **1.50** (d) 0.15
- (25) A circle of diameter 'd' cm has a radius of length
 (a) **$\frac{d}{2}$ cm** (b) 2d cm (c) $\frac{d}{4}$ cm (d) 4d cm
- (26) Subtract : $0.62 - 0.49$
 (a) 0.62 (b) 1.11 (c) 0.49 (d) **0.13**
- (27) Area of a rectangle is _____.
 (a) side * side (b) **$l * b$** (c) $2(l+b)$ (d) 4l
- (28) Convert $\frac{492}{100}$ into decimal
 (a) 49.2 (b) 0.492 (c) 492.01 (d) **4.92**
- (29) A die is an example of a
 (a) cone (b) **cube** (c) cylinder (d) cuboid
- (30) Solve : $x - 2 = 3$
 (a) **5** (b) 1 (c) -1 (d) -5
- (31) Find the area of the square whose side is 4 m.
 (a) 64 m^2 (b) **16 m^2** (c) 32 m^2 (d) 8 m^2
- (32) Write the following using numbers, literals and signs of basic operations :
 6 multiplied by x is decreased by 7
 (a) $7x - 6$ (b) **$6x - 7$** (c) $6x + 7$ (d) $7x + 6$
- (33) Concentric circles having same _____
 (a) diameter (b) radii (c) **centre** (d) all of these
- (34) Express the ratio in the simplest form - 12 : 36
 (a) 2 : 6 (b) 3 : 1 (c) 2 : 3 (d) **1 : 3**
- (35) Find the perimeter of a rectangular garden 5 m long and 4 m wide
 (a) 9 m^2 (b) 20 m^2 (c) **18 m^2** (d) 22 m^2
- (36) Solve : $5x = 20$
 (a) **4** (b) 25 (c) 15 (d) 100
- (37) Find the perimeter of a square whose side is 2 m.
 (a) **8 m** (b) 16 m (c) 4 m (d) 6 m
- (38) A _____ represents data through pictures of objects.
 (a) pie-graph (b) bar-graph (c) **pictograph** (d) cone-graph
- (39) Find the area of a rectangular board 3 m long and 2 m wide.
 (a) 5 m^2 (b) **6 m^2** (c) 10 m^2 (d) 12 m^2
- (40) Solve : $\frac{4}{3} - \frac{1}{2}$
 (a) $\frac{3}{5}$ (b) **$\frac{5}{6}$** (c) $\frac{3}{6}$ (d) $\frac{4}{6}$

Part – B

Q – 1 : Solve the following (any eight)

[16]

(1) Think of a number. Multiply it by 6 and add 7 to the result. Subtract 'y' from the result. What is the final outcome?

Ans : Let the number be x.

Multiplying it by 6, we get 6x.

Adding 7 to it gives $6x+7$.

Subtracting y from $6x+7$

$$= (6x+7)-y$$

$$= 6x-y+7$$

The final outcome is $6x-y+7$

(2) The cost of 20 pens is £ 240. Find the cost of One pen.

Ans : Cost of 20 pens = £ 240

So cost of 1 pen = £ 240/20

= £ 12

Hence, the cost of 1 pen is £ 12.

(3) Simplify : $2\frac{1}{3} + \frac{1}{3} + \frac{2}{3}$

Ans : $2\frac{1}{3} + \frac{1}{3} + \frac{2}{3}$

= $\frac{7}{3} + \frac{1}{3} + \frac{2}{3}$

= $\frac{10}{3}$ OR $3\frac{1}{3}$

(4) Convert $\frac{37}{4}$ into decimal fraction.

Ans : $\frac{37}{4} = \frac{(37*25)}{(4*25)}$

= $\frac{925}{100}$

= 9.25

(5) If $a=1$, $b=2$, $c = - 2$ find the value of $3a + 2b - c$.

Ans : Here, $a=1$, $b=2$, $c= -2$

So, $3a+2b-c = 3(1)+2(2)-(-2)$

= $3+4+2$

= 9

(6) Radius of a circle is 3.5 cm. What is its diameter ?

Ans : $r=3.5$ cm

So diameter, $d = 2r$

= $2*3.5$ cm

= 7 cm

(7) Find the perimeter of a square whose side is 81 cm.

Ans : Perimeter of a square = $4*side$

= $4*81$ cm

= 324 cm

(8) Find the area of a square whose side is 15.

Ans : Area of a square = $side*side$

= $15*15$

= 225

(9) Find the perimeter of a rectangle whose length and breadth are 22 m and 16 m respectively.

Ans : Perimeter of a rectangle = $2(l+b)$

= $2(22m+16m)$

= $2(38m)$

= 76m

Q – 2 : Solve the following (any four).**[12]**

(1) The sale of shoes of various sizes at a shop on a particular day is given below :

7, 5, 6, 9, 8, 4, 5, 5, 8, 9, 5, 9, 9, 6, 8, 7, 9, 6, 7, 9, 6, 7, 8, 5, 8, 9, 5, 4, 7, 8.

Represent the above data in the form of frequency distribution table.

Ans :

Shoe size	Tally Marks	Frequency
4	II	2
5	IIII I	6
6	IIII	4
7	IIII	5
8	IIII I	6
9	IIII II	7
	Total	30

(2) If side of a square is 2.5 m, find its perimeter and area.

Ans : Perimeter of a square = 4*side

$$= 4*2.5 \text{ m}$$

$$= 10 \text{ m}$$

Area of a square = side*side

$$= 2.5 \text{ m} * 2.5 \text{ m}$$

$$= 6.25 \text{ sq.m.}$$

(3) The radius of a circle is 42 cm. Find its circumference.

Ans : $r = 42 \text{ cm}$

Circumference, $C = 2\pi r$

$$C = 2*(22/7)*42\text{cm}$$

$$= (44*6) \text{ cm}$$

$$= 264 \text{ cm}$$

(4) If $x=2$, $y=-1$, $z=3$. Find the value of $2xy^4-5x^2+z^2+xy$

Ans : $2xy^4-5x^2+z^2+xy = 2(2)(-1)^4-5(2)^2+(3)^2+(2)(-1)$

$$= 2(2)(1)-5(4)+9-2$$

$$= 4-20+9-2$$

$$= 13-22$$

$$= -9$$

(5) Subtract the sum of $4(2/3)$ and $1(2/9)$ from the sum of $2(5/7)$ and $3(2/3)$.

Ans : sum of $4(2/3)$ and $1(2/9) = 4(2/3)+1(2/9)$

$$= (14/3) + (11/9)$$

$$= \{(14*3)/(3*3)\} + (11/9)$$

$$= (42/9) + (11/9)$$

$$= (42+11)/9$$

$$= 53/9$$

Sum of $2(5/7)$ and $3(2/3) = 2(5/7) + 3(2/3)$

$$= (19/7) + (11/3)$$

$$= \{(19*3)/(7*3)\} + \{(11*7)/(3*7)\}$$

$$= (57/21) + (77/21)$$

$$= (57+77)/21$$

$$= 134/21$$

Now, $(134/21)-(53/9) = \{(134*3)/(21*3)\} - \{(53*7)/(9*7)\}$

(L.C.M. of 21 and 9 is 63)

$$= (402/63) - (371/63)$$

$$= (402-371)/63$$

$$= 31/63$$

Q – 3 : Solve the following (any three).**[12]**

(1) A rectangular room is 10 m long and 6 m wide. Find the cost of covering the floor with a carpet 2 m wide at the rate of £ 42 per meter.

Ans : Length of rectangular room, $l = 10\text{m}$
 Breadth of rectangular room, $b = 6\text{m}$
 Area of the floor of room $= l \times b$
 $= 10\text{m} \times 6\text{m}$
 $= 60 \text{ sq.m}$

Since, the floor has to be covered with a carpet of 2m wide.

Let the length of the carpet be x .

So, Area of carpet = Area of the floor

$$x \times 2 = 60 \text{ sq.m}$$

$$x = (60/2)$$

$$x = 30\text{m}$$

so, length of carpet = 30m

The rate of carpet is £42 per metre.

So, Cost of covering the floor with carpet = £ (30*42)
 $= \text{£ } 1260$

(2) Following are the numbers of members in 25 families in a village.

7, 3, 3, 6, 8, 6, 3, 2, 5, 7, 3, 8, 6, 3, 5, 5, 7, 7, 8, 6, 6, 7, 7, 6, 5.

Prepare a frequency table using tally marks and answer the following question:

- What is the most common family size ?
- What is the smallest family size ?
- How many families are of the smallest size ?

Ans :

No. of members	Tally Marks	Frequency
2	I	1
3	III	5
5	III	4
6	III I	6
7	III I	6
8	III	3
	Total	25

- What is the most common family size ? = **6 and 7**
- What is the smallest family size ? = **2**
- How many families are of the smallest size ? = **1 family**

(3) Anya's house is $2\frac{9}{10}$ km from her school. She walked some distance and then took a bus for $2\frac{5}{7}$ km to reach the school. How far did she walk ?

Ans : Distance walked by Anya = Total distance – Distance for which she took the bus
 $= 2\frac{9}{10} \text{ km} - 2\frac{5}{7} \text{ km}$
 $= \frac{29}{10} \text{ km} - \frac{19}{7} \text{ km}$
 $= \left\{ \frac{29 \times 7}{10 \times 7} - \frac{19 \times 10}{7 \times 10} \right\} \text{ km}$
 (L.C.M. of 10 and 7 is 70)
 $= \left\{ \frac{203}{70} - \frac{190}{70} \right\} \text{ km}$
 $= \frac{203-190}{70} \text{ km}$
 $= \frac{13}{70} \text{ km}$

Thus, Anya walked $\frac{13}{70}$ km.




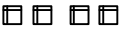

(4) The numbers of books in rooms of classes A to E are given below :


Class A : 30 class B : 50 class C : 20 class D : 40 class E : 50

Taking the scale 1 book = 10 books, draw the pictograph and answer the questions given below.

- (i) In which class are there maximum number of books ?
- (ii) In which class are there minimum number of books ?
- (iii) How many books in all are there in the classes A to E ?

Ans : Pictograph:

Class	Number of books
A	
B	
C	
D	
E	

 = 10 books

- (i) In which class are there maximum number of books ? = **Class B and E**
- (ii) In which class are there minimum number of books ? = **Class C**
- (iii) How many books in all are there in the classes A to E ? = **19*10 = 190 books in all classes**