

Question 1: Solve: $9x - 6 = 3x + 12$

- a) 1
- b) 6
- c) 3
- d) 4

Question 2: What is the value of $|-7| - |3 - 9|$

- a) -1
- b) 1
- c) 3
- d) -3

Question 3: A path around a square field of side 40 m is 2 m wide. Find the area of path.

- a) 156 cm^2
- b) 165 cm^2
- c) 180 cm^2
- d) 195 cm^2

Question 4: In a triangle, angles are in ratio 2:3:4. The smallest angle is

- a) 70°
- b) 60°
- c) 40°
- d) 30°

Question 5: A number plus its reciprocal equals $\frac{5}{2}$. If number is a fraction >1 , it is

- a) $\frac{1}{2}$
- b) $\frac{5}{2}$
- c) 2
- d) 1

Question 6: A grocer mixes rice of ₹40/kg and ₹60/kg to make 50 kg at ₹48/kg. Quantity of cheaper rice

- a) 35 kg
- b) 30 kg
- c) 40 kg
- d) 25 kg

Question 7: Simplify the ratio 24:36

- a) 1:2
- b) 2:3
- c) 3:4
- d) 4:5

Question 8: Two angles are supplementary. One angle is 120° , the other is

- a) 50°
- b) 60°
- c) 70°
- d) 80°

Question 9: If $4x = 3y$ and $x + y = 28$, find x.

- a) 12
- b) 16
- c) 21
- d) 14

Question 10: Before 2 years father is 3 times the age of son. If father's age is 47 years now, Find the age of son.

- a) 15
- b) 13
- c) 17
- d) 45

Question 11: If $\frac{a}{b} = \frac{3}{4}$ and $a + b = 28$. Find b .

- a) $\frac{5}{7}$
- b) 12
- c) 16
- d) $\frac{b}{a}$

Question 12: A sum of money is divided among A, B, C in ratio 2:3:5 respectively. If C gets ₹100. Find the total sum of money.

- a) 200
- b) 280
- c) 180
- d) 320

Question 13: The ratio of boys to girls in a class is 3:5. If there are 15 boys, number of girls are

- a) 18
- b) 25
- c) 30
- d) 45

Question 14: The product of two consecutive integers is 506. Find the numbers.

- a) 20 and 21
- b) 21 and 22
- c) 22 and 23
- d) 23 and 24

Question 15: Two cars travels at ratio of speed 3:4. If slower car covers 180 km in 3 hours. Faster car can cover ____km at same time.

- a) 200 km
- b) 240 km
- c) 220 km
- d) 280 km

Question 16: Expand: $(x + 2)(x + 3)$

- a) $x^2 + 2x + 3$
- b) $x^2 + 3x + 2$
- c) $x^2 + 6x + 5$
- d) $x^2 + 5x + 6$

Question 17: A man bought 3 kg apples and 2.5 kg oranges. He sold away 40% of apples and 50% of oranges. How much fruit remains in total?

- a) 3 kg
- b) 3.5 kg
- c) 3.05 kg
- d) 2.45 kg

Question 18: Convert 0.625 to fraction

- a) $\frac{625}{100}$
- b) $\frac{25}{40}$
- c) $\frac{1}{50}$
- d) $\frac{5}{8}$

Question 19: Find x if $3x + 5x - 20 = 100^\circ$.

- a) 15°
- b) 20°
- c) 25°
- d) 10°

Question 20: Which of these equations has $x=3$ as a solution?

- a) $4x=11$
- b) $3x-5=10$
- c) $x^2=8$
- d) $2x+1=7$

Question 21: Divide ₹ 120 among A and B such that A gets twice of B. Find B.

- a) ₹ 40
- b) ₹ 50
- c) ₹ 80
- d) ₹ 70

Question 22: The sum of least Common multiple and the greatest common factor of 10 and 24

- a) 2
- b) 34
- c) 120
- d) 122

Question 23: If two sides of a triangle are equal, it is:

- a) Equilateral
- b) Isosceles
- c) Scalene
- d) Right-angled

Question 24: Which of the following is divisible by 3?

- a) 1,234,553
- b) 1,234,560
- c) 1,234,562
- d) 1,234,565

Question 25: Multiply: 0.25×0.12

- a) 0.3
- b) 0.03
- c) 3
- d) 30

Question 26: A is 3 less than twice of B. If the value of A is 133, find B.

- a) 130
- b) 67
- c) 65
- d) 70

Question 27: The average of two dozen and three dozen is

- a) 12
- b) 15
- c) 30
- d) 60

Question 28: The altitude of a triangle divides the triangle into

- a) Two equilateral triangles
- b) Two isosceles triangles
- c) Two scalene triangles
- d) Two right-angled triangles

Question 29: A 30 L mixture contains milk and water in the ratio 4:1 respectively. Find the quantity of milk.

- a) 22 L
- b) 25 L
- c) 20 L
- d) 27 L

Question 30: Evaluate: $5 - 3 \times 2 + 4$

- a) 8
- b) 1
- c) 12
- d) 3

Question 31: In a bar graph, the length of each bar represents

- a) The number of bars
- b) The category name
- c) The frequency of data
- d) The width of intervals

Question 32: The ratio of ages of Mayank and Manish is 5:7. Sum of ages is 36. Find the age of Manish

- a) 21 years
- b) 15 years
- c) 26 years
- d) 12 years

Question 33: Evaluate: $(7.5 - 2.5) \times (\frac{3}{2})$

- a) 0.75
- b) 7.5
- c) 75
- d) $\frac{7}{2}$

Question 34: Average of 5 consecutive even numbers is 18. The largest number is

- a) 14
- b) 18
- c) 20
- d) 22

Question 35: Complete the pattern: 2, 6, 18, 54, 162, ____

- a) 324
- b) 296
- c) 486
- d) 374

Question 36: Evaluate: $(-8) + 15 - (-3)$

- a) 10
- b) 9
- c) 11
- d) -10

Question 37: Which of these is not a possible event?

- a) Rolling a 7 on a standard die
- b) Getting a tail on a coin toss
- c) Picking a red ball from a red ball box
- d) Drawing an ace from a full deck

Question 38: If a tangent touches a circle, the angle between the radius at the point of contact and the tangent is

- a) 30°
- b) 45°
- c) 60°
- d) 90°

Question 39: A reduces price by 10% then increases new price by 10%. Net effect is

- a) increase by 1%
- b) decrease by 1%
- c) decrease by 10%
- d) no change

Question 40: Two numbers are in ratio 2:3 and difference is 15. Find the numbers.

- a) 15 and 30
- b) 15 and 45
- c) 30 and 45
- d) 35 and 50

Question 41: The number of factors of 36 is

- a) 9
- b) 12
- c) 8
- d) 6

Question 42: What is the additive inverse of -25

- a) -25
- b) 0
- c) 1
- d) 25

Question 43: Which is larger: $\frac{4}{9} + \frac{1}{6}$ or $\frac{2}{3}$?

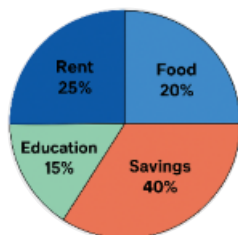
- a) $\frac{4}{9} + \frac{1}{6}$
- b) $\frac{2}{3}$
- c) Both are same
- d) Cannot determine

Question 44: The diagonals of a square are equal and bisect each other at

- a) 45°
- b) 60°
- c) 90°
- d) 120°

Question 45: A pie chart shows how a family spends their income. Convert the saving percentage to degree.

- a) 90°
- b) 72°
- c) 144°
- d) 54°



Question 46: GCD of 84 and 126 is

- a) 21
- b) 18
- c) 42
- d) 84

Question 47: The sum of two numbers is 45 and their difference is 9. Find the numbers.

- a) 27 and 18
- b) 24 and 15
- c) 36 and 24
- d) 19 and 26

Question 48: Two friends share $\frac{5}{6}$ kg cake in ratio 2:3. The smallest share is:

- a) $\frac{2}{3}$
- b) $\frac{2}{5}$
- c) $\frac{3}{6}$
- d) $\frac{2}{6}$

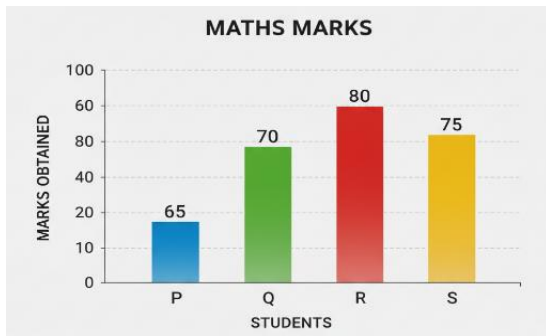
Question 49: Ratio 3:5 scaled to make sum 64. Find the largest part.

- a) 24
- b) 40
- c) 48
- d) 32

Question 50: If $A : B = 2 : 3$ and $B : C = 4 : 5$, then $A : C = ?$

- a) 2 : 5
- b) 7 : 5
- c) 8 : 15
- d) 6 : 15

Question (51 – 53) : The pie chart mentions the marks secured by the students in Maths.



Question 51: What is the difference in marks between the highest scorer and the lowest scorer?

- a) 10
- b) 5
- c) 15
- d) 20

Question 52: What is the average mark of all the students?

- a) 72
- b) 70.5
- c) 75.25
- d) 72.5

Question 53: Who scored third highest mark?

- a) P
- b) Q
- c) R
- d) S

Question 54: Two numbers are in proportion if

- a) Sum of extremes = Sum of means
- b) Difference of extremes = Difference of means
- c) Product of extremes = Product of means
- d) Ratio of extremes = Sum of means

Question 55: Which of the following is not an integer?

- a) -7
- b) 0
- c) 3.5
- d) 12

Question 56: The term $4ab^2$ has

- a) Coefficient 4
- b) Variable a^2
- c) Constant $4b$
- d) No variable

Question 57: Sum of angles in a quadrilateral is

- a) 180°
- b) 90°
- c) 360°
- d) 270°

Question 58: Which of the following is an unlike term to $3x^2$?

- a) $5x^2$
- b) $7x$
- c) $-2x^2$
- d) x^2

Question 59: A rope is $\frac{7}{8}$ m long. Two pieces $\frac{3}{16}$ m and $\frac{1}{4}$ m are cut. Remaining length is

- a) $\frac{3}{8}$ m
- b) $\frac{5}{16}$ m
- c) $\frac{7}{16}$ m
- d) $\frac{1}{2}$ m

Question 60: If a bag has 3 red and 2 blue balls. The probability of picking a red ball is

a) $\frac{3}{6}$

b) $\frac{2}{5}$

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

d) $\frac{5}{6}$

(NOT TO BE EVALUATED)

[illegible]