



SCHOLASTIC COUNCIL FOR ACADEMIC EXCELLENCE

The All India Scholastic Quest Olympiads

Time: 1 hour

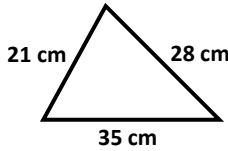
Scholastic Maths Olympiad – Class 8

Total Marks: 40

Paper Code: M-8401/17-18

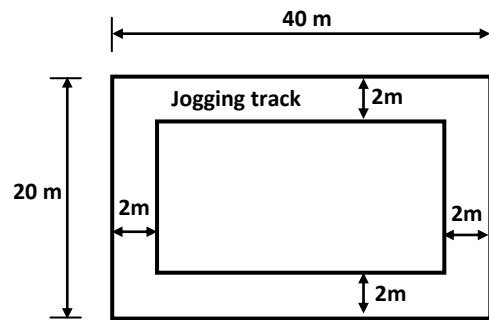
Total Pages: 4

- Find the compound interest on ₹ 2500 at the rate of 8% per annum for 12 months when interest is compounded half-yearly.
A) ₹ 416 B) ₹ 204 C) ₹ 286 D) ₹ 278
- If $(a + b) = 15$ and $ab = 55$, find $a^2 + b^2$
A) 140 B) 135 C) 128 D) 115
- If each interior angle of a regular polygon is 156° , find the number of sides the polygon has.
A) 13 B) 14 C) 15 D) 16
- The volume of a cube is 512 cubic centimetres. What is the area of each face of the cube?
A) 16 cm^2 B) 36 cm^2 C) 64 cm^2 D) 128 cm^2
- By selling a mobile phone for ₹ 12,190, a trader gains 6%. Find the Cost Price of the mobile phone.
A) ₹ 11,000 B) ₹ 11,500 C) ₹ 11,800 D) ₹ 12,000
- In a pie chart, the total angle at the centre of the circle is _____
A) 360° B) 300° C) 180° D) 100°
- Three numbers are in the ratio 2 : 3 : 5 and the sum of their cubes is 20,000. Find the largest of the three numbers.
A) 10 B) 12 C) 15 D) 25
- The diagonal of a square is 16 cm. Find its area.
A) 128 cm^2 B) 64 cm^2 C) 256 cm^2 D) 284 cm^2
- Express the decimal 0.72 as a rational number.
A) $\frac{72}{10}$ B) $\frac{36}{25}$ C) $\frac{26}{50}$ D) $\frac{18}{25}$
- A machine is sold for ₹ 59,800 and fetches a loss of 8%. Find the cost price of the machine.
A) ₹ 64,000 B) ₹ 64,500 C) ₹ 65,000 D) ₹ 66,500
- $994 \times 1006 = ?$
A) 999864 B) 999964 C) 999984 D) 999994
- If 25 men can build a wall 75 meters long in 6 days, what length of a similar wall can be built by 34 men in 5 days?
A) 82 m B) 84m C) 85 m D) 87 m

13. Find the principal that will yield a compound interest of ₹ 1,025 in 2 years at 5% rate of interest per annum.
A) ₹ 10,000 B) ₹ 10,500 C) ₹ 11,000 D) ₹ 11,500
14. The mean of three numbers is 21. The mean of other five numbers is 37. Find the mean of all the eight numbers.
A) 29 B) 31 C) 32 D) 28
15. Find the smallest number by which 4500 should be multiplied so that the product is a perfect cube?
A) 2 B) 4 C) 6 D) 8
16. Rahul can complete a work in 6 days, whereas Vijay can complete it in 12 days. If they work together, in how many days, can the work be completed?
A) 3 days B) 4 days C) 5 days D) 2 days
17. Find the area of a triangle whose sides are 21 cm, 28 cm and 35 cm.
A) 264 cm^2 B) 276 cm^2
C) 284 cm^2 D) 294 cm^2
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18. Mr. Mehta's total monthly expenditure is ₹ 45,000. His monthly expenditure on rent is ₹ 9,000. The central angle of the sector representing rent expenses in the pie chart would be _____.
A) 108° B) 80° C) 72° D) 64°
19. If the ratio of interior angle to exterior angle of a regular polygon is 11:2, find the number of sides that the polygon has.
A) 13 B) 12 C) 11 D) 9
20. The sum of the multiplicative inverse and additive inverse of -7 is _____.
A) $\frac{48}{7}$ B) $\frac{-48}{7}$ C) $\frac{50}{7}$ D) $\frac{-50}{7}$
21. The cost price of 30 articles is same as the selling price of 24 articles. Find the gain percentage.
A) 20% B) 24% C) 25% D) 30%
22. What is the sum of all the interior angles of a polygon of 17 sides?
A) 2600° B) 2700° C) 2740° D) 2860°
23. If $\sqrt{2} = 1.4142$, find the value of $\frac{3 + 2\sqrt{2}}{\sqrt{2} + 1}$
A) 2.3456 B) 2.6542 C) 2.4142 D) 4.4142
24. Find the difference between Compound Interest and Simple Interest for a sum of ₹ 10,000 lent at 7% p.a. in 2 years.
A) ₹ 45 B) ₹ 50 C) ₹ 64 D) ₹ 49
25. Determine the measurement of an exterior angle of a regular polygon that has sum of interior angles equal to 2880° ?
A) 30° B) 25° C) 22° D) 20°

26. A jogging track of uniform width 2 m, runs around the inside of a rectangular field 40 m by 20 m. Find the area of the path.

- A) 264 m^2 B) 248 m^2
C) 236 m^2 D) 224 m^2



27. Mahesh and Naresh can do a piece of work in 10 days, Naresh and Suresh in 12 days, Suresh and Mahesh in 15 days. In how many days will they finish it working together?

- A) 8 days B) 9 days C) 7 days D) 6 days

28. $\sqrt[3]{512} + \sqrt{324} \div \sqrt[3]{729} = ?$

- A) $\frac{26}{9}$ B) $\frac{8}{3}$ C) 10 D) None of these

29. The lengths of the diagonals of rhombus are in the ratio 4:3. If its area is 384 cm^2 , find its side.

- A) 14 cm B) 16 cm C) 18 cm D) 20 cm

30. If $x + \frac{1}{x} = \frac{13}{6}$, find the value of $x^2 + \frac{1}{x^2}$.

- A) $\frac{1}{6}$ B) $\frac{97}{36}$ C) $\frac{47}{28}$ D) $\frac{47}{36}$

31. The mean of 4, (b + 7), 16, 27, 2b, (3b – 5) and 15 is 52, find the value of b.

- A) 47 B) 50 C) 51 D) 53

32. A toy car marked at ₹ 560 is sold for ₹ 448. What is the percentage of discount?

- A) 20% B) 24% C) 25% D) 30%

33. In a pie chart showing the percentage of buyers of different brands of mobile phones, the central angle of the sector representing the Samsung brand is 126° . Find the percentage of buyers who prefer Samsung mobile phones.

- A) 32% B) 34% C) 35% D) 36%

34. Find radius of the circle, whose area is 13.86 cm^2 .

- A) 2.1 cm B) 2.2 cm C) 2.3 cm D) 2.4 cm

35. Which of the rational numbers $\frac{4}{9}$, $\frac{-5}{6}$, $\frac{-8}{-17}$ and $\frac{11}{-24}$ is the smallest?

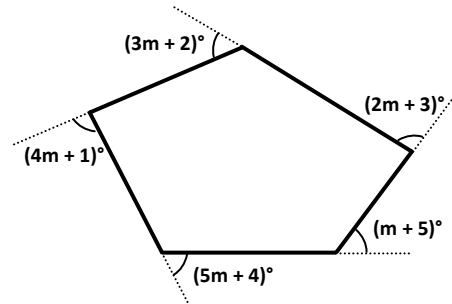
- A) $\frac{4}{9}$ B) $\frac{-5}{6}$ C) $\frac{-8}{-17}$ D) $\frac{11}{-24}$

36. The sum of two rational numbers is -17 . If one of the numbers is $\frac{-11}{9}$, the other number is _____

- A) $\frac{164}{9}$ B) $\frac{-164}{9}$ C) $\frac{-142}{9}$ D) $\frac{-131}{9}$

37. The population of a village has a constant growth of 4% every year. If its present population is 54,080 what was the population two years ago?
A) 52,000 B) 51,500 C) 50,000 D) 49,500

38. The exterior angles of a pentagon are $(m + 5)^\circ$, $(2m + 3)^\circ$, $(3m + 2)^\circ$, $(4m + 1)^\circ$ and $(5m + 4)^\circ$ respectively. Find the value of m .



- A) 23
C) 25

- B) 24
D) 26

39. If $7k = 86^2 - 79^2$, then find the value of k .

A) 195

B) 185

C) 175

D) 165

40. There are 2 taps A and B to fill up a water tank. The tank can be filled in 30 minutes if both taps are on. The same tank can be filled in 48 minutes if tap A alone is on. How much time will tap B alone take to fill up the same tank?

A) 72 minutes

B) 80 minutes

C) 84 minutes

D) 90 minutes



Paper Code: M-8401/17-18 Mathematics							
1.	B	11.	B	21.	C	31.	B
2.	D	12.	C	22.	B	32.	A
3.	C	13.	A	23.	C	33.	C
4.	C	14.	B	24.	D	34.	A
5.	B	15.	C	25.	D	35.	B
6.	A	16.	B	26.	D	36.	C
7.	D	17.	D	27.	A	37.	C
8.	A	18.	C	28.	C	38.	A
9.	D	19.	A	29.	D	39.	D
10.	C	20.	A	30.	B	40.	B