



# SCHOLASTIC COUNCIL FOR ACADEMIC EXCELLENCE

## The All India Scholastic Quest Olympiads

Time: 1 hour

Scholastic Maths Olympiad – Class 7

Total Marks: 40

Paper Code: M-7401/17-18

Total pages: 4

- Sachin bought a T-shirt for ₹ 750 and sold it for ₹ 825. Find his gain per cent.  
A) 5%                      B) 10%                      C) 15%                      D) 20%
- A class of 25 students took a mathematics test. 10 students had an average score of 80. The other students had an average score of 60. What is the average score of the whole class?  
A) 68                      B) 70                      C) 72                      D) 75
- Priya spent  $\frac{3}{4}$  of her savings on furniture and the rest on a mobile phone. If the mobile phone cost her ₹ 7,500, what were her original savings?  
A) ₹ 20,000                      B) ₹ 22,500                      C) ₹ 25,000                      D) ₹ 30,000
- A sum of ₹ 15,000 amounts to ₹ 17,700 in 3 years. Find the rate of simple interest.  
A) 6%                      B) 7%                      C) 8%                      D) 9%
- If  $\sqrt{35} = 5.916$  then the value of  $\sqrt{\frac{7}{5}}$  is \_\_\_\_\_  
A) 1.3264                      B) 1.1832                      C) 1.4927                      D) 1.6928
- If the length of each side of the equilateral triangle is  $(k+1)$  cm, then the perimeter of the equilateral triangle is \_\_\_\_\_  
A)  $3k$                       B)  $3k+1$                       C)  $3k+3$                       D)  $k+3$
- If  $\frac{x}{2} + 2 = \frac{8}{3}$  then the value of 'x' is \_\_\_\_\_  
A)  $\frac{1}{3}$                       B)  $\frac{2}{3}$                       C)  $\frac{4}{3}$                       D)  $\frac{8}{3}$
- If  $A : B = 3 : 4$ ,  $B : C = 6 : 7$ , find the ratio of  $A : B : C$ .  
A)  $9 : 12 : 14$                       B)  $6 : 8 : 14$                       C)  $9 : 15 : 14$                       D)  $9 : 12 : 21$
- If 4 is subtracted from seven times a number, the result is 52. Find the number.  
A) 7                      B) 8                      C) 12                      D) 14
- Mihir drives his car to a place 200 km away at an average speed of 50 km/hr and returns at 40 km/hr. What is his average speed for the whole journey?  
A)  $42\frac{4}{9}$  km/hr                      B)  $40\frac{5}{9}$  km/hr                      C)  $42\frac{7}{9}$  km/hr                      D)  $44\frac{4}{9}$  km/hr

11. What is the value of  $(81)^{\frac{3}{4}}$  ?  
 A) 18                                      B) 24                                      C) 27                                      D) 36
12. The length and breadth of a rectangular park are in the ratio 5 : 4 and its area is  $2420 \text{ m}^2$ . Find the perimeter of the park.  
 A) 99m                                      B) 198 m                                      C) 90 m                                      D) 180 m
13. What number should be subtracted from  $\frac{4}{3}$  to get  $\frac{3}{4}$  ?  
 A)  $\frac{5}{7}$                                       B)  $\frac{7}{12}$                                       C)  $\frac{9}{12}$                                       D)  $\frac{6}{7}$
14. Find the total surface area of a cone, if its slant height is 10 cm and the radius of its base is 7 cm.  
 A)  $374 \text{ cm}^2$                                       B)  $382 \text{ cm}^2$                                       C)  $426 \text{ cm}^2$                                       D)  $462 \text{ cm}^2$
15.  $2497 \times 187 + 2497 \times 13 = ?$   
 A) 486200                                      B) 467250                                      C) 499400                                      D) 496500
16. Average age of five students is 15 years and the ratio of their ages is 1 : 2 : 3 : 4 : 5. Find difference between oldest and youngest student's age.  
 A) 20 years                                      B) 10 years                                      C) 12 years                                      D) 15 years
17. A book was sold for ₹ 575 thereby gaining 15%. Find the cost price of the book.  
 A) ₹ 550                                      B) ₹ 500                                      C) ₹ 450                                      D) ₹ 520
18.  $\sqrt{28} \times \sqrt{700} = ?$   
 A) 110                                      B) 120                                      C) 130                                      D) 140
19. Mr. X starts a business with ₹ 30,000. Mr. Y joins in the business after 4 months with ₹ 20,000. What will be the ratio in which they should share the profit at the end of the year?  
 A) 5 : 4                                      B) 7 : 4                                      C) 9 : 4                                      D) 4 : 9
20. The mean of five numbers is 28. If one of the numbers is excluded, the mean gets reduced by 2. Find the excluded number.  
 A) 24                                      B) 30                                      C) 32                                      D) 36
21. A man took a loan at the rate of 10% per annum simple interest. After 3 years, he had to pay ₹ 15,000 interest. What is the principal amount borrowed by him?  
 A) ₹ 40,000                                      B) ₹ 45,000                                      C) ₹ 50,000                                      D) ₹ 60,000
22. Two numbers are in the ratio 9 : 7 and the difference between them is 60. Find their sum.  
 A) 450                                      B) 480                                      C) 500                                      D) 520
23. If the total surface area of a cube is  $294 \text{ cm}^2$ , what is its volume?  
 A)  $243 \text{ cm}^3$                                       B)  $343 \text{ cm}^3$                                       C)  $351 \text{ cm}^3$                                       D)  $400 \text{ cm}^3$
24. A ribbon of length  $5\frac{1}{4}$  m is cut into small pieces each of length  $\frac{3}{4}$  m. Find the number of pieces.  
 A) 5                                      B) 6                                      C) 7                                      D) 8

25. What should be added to  $(4x + 7y)$  to get  $(5x - 8y)$  ?  
 A)  $(x - y)$                       B)  $(9x - y)$                       C)  $(x + y)$                       D)  $(x - 15y)$
26. Father's age is three times his son's age. Four years ago, he was 4 times his son's age. Find the present age of the father.  
 A) 32 years                      B) 36 years                      C) 38 years                      D) 40 years
27. What is the reciprocal of  $4\frac{3}{7}$  ?  
 A)  $\frac{7}{12}$                       B)  $\frac{7}{19}$                       C)  $\frac{7}{31}$                       D)  $\frac{7}{84}$
28. Find the sum of the all the natural numbers from 25 to 50.  
 A) 975                      B) 950                      C) 925                      D) 915
29. The batting average for 40 innings of a cricketer is 60 runs. If his last two innings are excluded, the average of remaining 38 innings is 55 runs. Find the sum of runs of last two innings.  
 A) 310                      B) 290                      C) 320                      D) 280
30. A wire in the shape of rectangle of length 25 cm and breadth 17 cm is re-bent to form a square. What will be the measure of each side?  
 A) 21 cm                      B) 23 cm                      C) 24 cm                      D) 26 cm
31. If  $m$  and  $n$  are whole numbers such that  $m^n = 32$ , the value of  $(m - 1)^{n+1}$  is \_\_\_\_\_  
 A) 1                      B) 6                      C) 64                      D) 128
32. Find the compound interest on ₹ 8,400 at 5% per annum for 2 years, compounded annually.  
 A) ₹ 1256                      B) ₹ 9261                      C) ₹ 861                      D) ₹ 986
33. A car runs 12 km using 1 litre of petrol. How much distance will it cover using  $7\frac{1}{4}$  litres of petrol?  
 A) 85 km                      B) 87 km                      C) 90 km                      D) 96 km
34. A, B, C started a partnership business by investing ₹ 36,000, ₹ 42,000 and ₹ 60,000 respectively. At the end of the year, the profit was distributed among them. If the total profit is ₹ 57,500, what is C's share?  
 A) ₹ 20,000                      B) ₹ 22,000                      C) ₹ 24,000                      D) ₹ 25,000
35. Raman purchased a car for ₹ 70,000. After spending ₹ 6,000 on repair, he sold it with 20% profit. At what price did he sell the car?  
 A) ₹ 89,320                      B) ₹ 90,600                      C) ₹ 91,800                      D) ₹ 91,200
36. If  $\left(\frac{a}{b}\right)^{2x+1} = \left(\frac{b}{a}\right)^{x-7}$  Find the value of 'x'.  
 A) 1                      B) 2                      C) 3                      D) 4
37. The mean weight of a group of seven boys is 56 kg. The individual weights (in kg) of six of them are 52, 57, 55, 60, 59 and 55. Find the weight of the seventh boy.  
 A) 52 kg                      B) 53 kg                      C) 54 kg                      D) 56 kg

38. The sum of five consecutive even numbers is 650. What is the difference between the greatest and the smallest of these numbers?  
A) 6                                      B) 8                                      C) 10                                      D) 12
39. A bag contains ₹ 5400 in the form of notes of ₹ 20, ₹ 50 and ₹ 100 in the ratio 5 : 2 : 4. Find the number of notes of ₹ 20.  
A) 40                                      B) 42                                      C) 45                                      D) 50
40. In a bag of balls,  $\frac{1}{4}$  are green,  $\frac{1}{8}$  are blue and the remaining 15 are red. How many balls are blue?  
A) 24                                      B) 6                                      C) 4                                      D) 3



<b>Mathematics 7th Paper Code: M-7401/17-18</b>							
1.	<b>B</b>	11.	<b>C</b>	21.	<b>C</b>	31.	<b>A</b>
2.	<b>A</b>	12.	<b>B</b>	22.	<b>B</b>	32.	<b>C</b>
3.	<b>D</b>	13.	<b>B</b>	23.	<b>B</b>	33.	<b>B</b>
4.	<b>A</b>	14.	<b>A</b>	24.	<b>C</b>	34.	<b>D</b>
5.	<b>B</b>	15.	<b>C</b>	25.	<b>D</b>	35.	<b>D</b>
6.	<b>C</b>	16.	<b>A</b>	26.	<b>B</b>	36.	<b>B</b>
7.	<b>C</b>	17.	<b>B</b>	27.	<b>C</b>	37.	<b>C</b>
8.	<b>A</b>	18.	<b>D</b>	28.	<b>A</b>	38.	<b>B</b>
9.	<b>B</b>	19.	<b>C</b>	29.	<b>A</b>	39.	<b>C</b>
10.	<b>D</b>	20.	<b>D</b>	30.	<b>A</b>	40.	<b>D</b>

<b>MATHEMATICS – ScAE 2017-18</b>							
1.		11.		21.		31.	
2.		12.		22.		32.	
3.		13.		23.		33.	
4.		14.		24.		34.	
5.		15.		25.		35.	
6.		16.		26.		36.	
7.		17.		27.		37.	
8.		18.		28.		38.	
9.		19.		29.		39.	
10.		20.		30.		40.	