

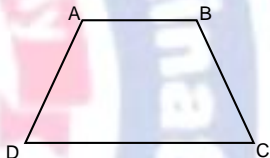
**INTERNATIONAL TALENT SEARCH EXAMINATION
2024 – 2025 PRACTICE PAPER**

CLASS – VIII (MATHEMATICS)

Set – C

1. If $\frac{1}{2} \times \left(\frac{3}{4} + -\frac{5}{12} \right) = \frac{1}{2} \times x + y \times -\frac{5}{12}$, then
- (A) $x = \frac{3}{4}, y = \frac{1}{2}$ (B) $x = \frac{1}{2}, y = \frac{3}{4}$
(C) $x = \frac{3}{4}, y = \frac{5}{12}$ (D) none of these
2. If $\frac{3}{4} + \left(-\frac{3}{5} \right) + \left(-\frac{2}{3} \right) + \frac{5}{8} + k = -\frac{19}{120}$, then k is equal to
- (A) $\frac{2}{15}$ (B) $-\frac{2}{15}$
(C) $\frac{4}{15}$ (D) $-\frac{4}{15}$
3. The greatest number of three digits which is a perfect square is
- (A) 999 (B) 961
(C) 981 (D) 975
4. To get a perfect square we should divide 3698 by
- (A) 2 (B) 3
(C) 4 (D) 5
5. If $\sqrt[3]{16\frac{16}{27}} = \frac{4}{3} \times \sqrt[3]{y}$, then the value of y is
- (A) $\frac{2}{3}$ (B) 7
(C) $\frac{2}{9}$ (D) $\frac{4}{9}$
6. Value of $\sqrt[3]{-\frac{4913}{2744}}$ is equal to
- (A) $\frac{16}{13}$ (B) $-\frac{17}{14}$
(C) $\frac{17}{13}$ (D) $-\frac{16}{14}$
7. Five years ago, a man was seven times as old as his son. Five years hence, the father will be 3 times as old as his son. Their present ages (in years) are:

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- (A) 12, 48
(C) 11, 44
- (B) 10, 40
(D) none of these
8. A number consists of two digits whose sum is 8. If 18 is added to the number, its digits are reversed. Then the number is equal to
(A) 63
(C) 35
- (B) 53
(D) 36
9. The angles of a quadrilateral are in the ratio 2 : 3 : 6 : 7. The smallest angle is
(A) 30°
(C) 50°
- (B) 40°
(D) 60°
10. The length and the breadth of a rectangle are 8 cm and 6 cm respectively. The length of the diagonal will be
(A) 8 cm
(C) 12 cm
- (B) 10 cm
(D) 13 cm
11. If each exterior angle of a regular polygon is 45° then it is a
(A) pentagon
(C) hexagon
- (B) octagon
(D) decagon
12. In an isosceles trapezium ABCD, $\angle A = \frac{8}{9}x + \frac{5}{2}$ and $\angle B = \frac{6}{7}x + \frac{13}{2}$. Then x is
(A) 155
(C) 125
- (B) 255
(D) 126
- 
13. The central angle of a component whose value is 68 is 17°. Then the central angle of the component whose value is 96, is
(A) 68°
(C) 24°
- (B) 45°
(D) 17°
14. In a simultaneous throw of two dice, what is the probability of getting a total of 7?
(A) $\frac{1}{6}$
(C) $\frac{2}{7}$
- (B) $\frac{1}{4}$
(D) $\frac{3}{4}$
15. A straight line is represented by
(A) quadratic equation
(C) linear equation
- (B) polynomial
(D) none of these
16. Line joining the points (1, 2); (5, 10) and (6, 12) must pass through
(A) (3, 3)
(C) (0, 3)
- (B) (3, 0)
(D) (0, 0)

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17. The length of a rectangle is increased by 34% by what % should the breadth be reduced such that area remains same?
(A) 245% (B) 25.37%
(C) 20% (D) 34%
18. What quantity of water should be taken out to concentrate 15 litres of 45% acidic liquid to 60% acidic liquid?
(A) 5 litres (B) 10 litres
(C) 6 litres (D) None of these
19. If $x + \frac{1}{x} = 20$, the value of $x^2 + \frac{1}{x^2}$ is equal to:
(A) 398 (B) 420
(C) 460 (D) none of these
20. If $xy = 9$ and $x - y = 7$, the value of $x^2 + y^2$ is equal to:
(A) 72 (B) 67
(C) 56 (D) 42
21. The factor of $p^4 + 9p^2q^2 + 81q^4$ is:
(A) $(p^2 - 3pq + 9q^2)(p^2 - 3pq - 9q^2)$ (B) $(p^2 + 3pq + 9q^2)(p^2 - 3pq + 9q^2)$
(C) $(p + q)(p + 3q)^3$ (D) none of these
22. The factor of $c^{22} - (5a - 3b)^2$ is:
(A) $(c^{11} + 5a - 3b)(c^{11} - 5a + 3b)$ (B) $(c^{11} + 5a - 3b)(c^{11} + 5a + 3b)$
(C) $(c^{11} + 5a - 3b)^2$ (D) none of these
23. If $(m^3 + 2^3 + 3^3)^{\frac{5}{2}} = (6)^{-5}$, then m can be equal to
(A) -1 (B) 1/2
(C) 2 (D) 1
24. If we multiply m with $\left(\frac{256}{6561}\right)^{\frac{5}{8}}$ we get 1, then m =
(A) $\frac{243}{32}$ (B) $\frac{32}{243}$
(C) $\frac{28}{243}$ (D) $\frac{243}{28}$
25. If x and y vary directly then the constant of variation is
(A) x + y (B) x × y
(C) $\frac{x}{y}$ (D) x - y
26. 6 men and 9 women can do a piece of work in 4 days. 4 men and 4 women can do it in 8 days. In how many days can 20 men and 6 women do the same work?
(A) 2 (B) 3
(C) 1 (D) 4

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27. If the lateral surface area of a cuboid is 600 cm^2 and length and height are 20cm and 10cm respectively, then its breadth is equal to:
(A) 5 cm (B) 15 cm
(C) 10 cm (D) 25 cm
28. The volume of a cylinder is 448π and radius is 8cm. The height of cylinder is equal to:
(A) 5 cm (B) 10 cm
(C) 12 cm (D) 7 cm
29. In a two digit number, the digit in the units place is four times the digit in the tens place and sum of the digit is 10. Then the number is
(A) 14 (B) 50
(C) 28 (D) 82
30. Generalized form of a two-digit number is
(A) $x + y$ (B) $10x + y$
(C) xy (D) $10x - y$
31. Solid having only line segments as its edges is a
(A) polyhedron (B) cone
(C) cylinder (D) polygon
32. In a solid if $F = V = 5$, then the number of edges in this shape is
(A) 6 (B) 4
(C) 8 (D) 2
33. The value of $\left(-\frac{7}{18} \times \frac{15}{-7}\right) - \left(1 \times \frac{1}{4}\right) + \left(\frac{1}{2} \times \frac{1}{4}\right)$ is equal to
(A) $\frac{17}{26}$ (B) $\frac{17}{24}$
(C) $\frac{17}{48}$ (D) $\frac{48}{17}$
34. The greatest number of 4 digits which is a perfect square is
(A) 9255 (B) 9999
(C) 9801 (D) 9981
35. $1^3 + 2^3 + 3^3 + \dots + 9^3$ is equal to
(A) 1025 (B) 2025
(C) 3025 (D) 4025
36. The sum of two numbers is 45 and their ratio is 7 : 8. Then the numbers are
(A) 18, 27 (B) 20, 25
(C) 15, 30 (D) 21, 24

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37. The diagonal of a square measures x cm. Its side will be equal to
(A) $\frac{x}{2}\sqrt{2}$ cm (B) $\sqrt{2}x$ cm
(C) $\frac{x}{2}$ cm (D) none of these
38. Sum of all the exterior angles of a n -sided polygon is:
(A) 180° (B) 360°
(C) 270° (D) 540°
39. The value of the components with central angle 18° in a pie-chart is 90. Then, the value of the components with central angle 22° is
(A) 94 (B) 90
(C) 110 (D) none of these
40. The number of axes a graph has/have
(A) 1 (B) 2
(C) 3 (D) 4
41. The cost of petrol is increased by 17%. By what percent should the consumption be reduced such that expenditure is constant?
(A) 14.5% (B) 17.5%
(C) 20% (D) none of these
42. If $xy = 6$ and $3x + 2y = 12$, then the value of $9x^2 + 4y^2$ is:
(A) 66 (B) 72
(C) 80 (D) 84
43. $(x - k)$ is the HCF of $x^2 + x - 12$ and $2x^2 - kx - 9$ then the value of k is
(A) 0 (B) -3
(C) 3 (D) can't determined
44. If $(0.01024)^{\frac{p}{q}} = \left(\frac{4}{10}\right)^3$, then $(p,q) =$
(A) (2, 3) (B) (3, 5)
(C) (3, 2) (D) (5, 3)
45. For a journey of 165 km by rail. One has to pay Rs 66 as the fare. What is the fare for a journey of 70 km?
(A) Rs 35 (B) Rs 42
(C) Rs 37.50 (D) Rs 28

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