

INTERNATIONAL TALENT SEARCH EXAMINATION

Class VII Mathematics Question Set

1. **Commutative Property**

Which of the following is correct?

- A) $3+5=5+3$ and $33+5=5+33$
- B) $4+6=6+4$ and $44+6=6+44$
- C) Both A and B
- D) None of these

2. **Volume of a Cube**

If the side of a cube is 4 cm, what is its volume?

(Diagram: A cube with labeled side length)

3. **Addition of Fractions**

What is $14\frac{1}{4} + \frac{2}{4}$?

- A) $34\frac{3}{4}$
- B) 111
- C) $12\frac{1}{2}$
- D) None of these

4. **Area of a Rectangle**

If the length is 10 cm and the width is 5 cm, find the area.

(Diagram: Rectangle with labeled dimensions)

5. **Perimeter of a Triangle**

A triangle has sides of lengths 5 cm, 12 cm, and 13 cm. What is its perimeter?

(Diagram: Triangle with labeled sides)

6. **Multiplication of Decimals**

What is 2.5×0.4 ?

- A) 1.0
- B) 1.5
- C) 2.0
- D) None of these

7. **Simple Interest Calculation**

If you invest Rs. 1000 at an interest rate of 5% per annum for 2 years, what is the simple interest?

(Diagram: Money bag with interest calculation)

8. **Proportions**

If $a:b=2:3$ and $b:c=3:4$, find $a:c$.

- A) 2:4
- B) 2:6
- C) 3:4
- D) None of these

9. **Finding the Mean**

Find the mean of the numbers 2, 3, 5, 7, 8.

- A) 4.5
- B) 5
- C) 6
- D) None of these

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10. Percentages

What is 20% of 150?

- A) 25
- B) 30
- C) 20
- D) 15

11. Line Symmetry

Which of the following shapes has line symmetry?

(Diagram: Shapes like a butterfly, rectangle, and random shape)

12. Circle Area Calculation

What is the area of a circle with a radius of 7 cm?

(Diagram: Circle with radius labeled)

- A) 154 cm^2
- B) 144 cm^2
- C) 100 cm^2
- D) None of these

13. Probability

If a bag contains 3 red and 2 blue balls, what is the probability of picking a red ball?

- A) $\frac{3}{5}$
- B) $\frac{2}{5}$
- C) $\frac{1}{2}$
- D) None of these

14. Ratios

Simplify the ratio 20:45.

- A) 4:9
- B) 2:5
- C) 1:2
- D) None of these

15. Exponents

What is $2^{3 \times 2}$?

- A) 6
- B) 8
- C) 4
- D) 3

16. Finding Angles

If $\angle A = 40^\circ$ and $\angle B = 60^\circ$, what is $\angle C$ in triangle ABC?

(Diagram: Triangle ABC with angles labeled)

17. Graph Interpretation

(Diagram: A bar graph showing sales data for four products)

What is the highest selling product?

18. Distance Calculation

A car travels 60 km in 1 hour. How far will it travel in 4 hours?

- A) 240 km
- B) 180 km
- C) 150 km
- D) None of these

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19. Finding LCM

Find the least common multiple of 6 and 8.

- A) 12
- B) 24
- C) 36
- D) 48

20. Volume of Cylinder

What is the volume of a cylinder with radius 3 cm and height 5 cm?

(Diagram: Cylinder with labeled dimensions)

- A) 45 cm^3
- B) 28.26 cm^3
- C) 84.78 cm^3
- D) None of these

21. Prime Numbers

How many prime numbers are there between 1 and 20?

- A) 8
- B) 7
- C) 6
- D) 5

22. Finding the Median

Find the median of the following set: 1, 3, 3, 6, 7, 8, 9.

- A) 3
- B) 6
- C) 7
- D) 5

23. Finding HCF

What is the highest common factor of 12 and 15?

- A) 3
- B) 4
- C) 6
- D) None of these

24. Triangle Types

Classify triangle ABC based on its angles if $\angle A = 90^\circ$.

- A) Acute
- B) Right
- C) Obtuse
- D) None of these

25. Algebraic Expressions

Simplify $2x + 3x - 5$ and $2x + 3x - 5$.

- A) $5x - 5$
- B) $5x$
- C) -5
- D) None of these

26. Finding the Missing Number

If $5 + x = 12$ and $5 + x = 12$, what is x ?

- A) 5
- B) 7
- C) 10
- D) 12

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27. Graph of a Function

(Diagram: A simple graph showing $y=x^2$)
What shape does this graph represent?

28. Divisibility Rule

Which of the following numbers is divisible by 3?

- A) 124
- B) 126
- C) 128
- D) 130

29. Surface Area of a Cube

What is the surface area of a cube with side length 4 cm?

- A) 96 cm^2
- B) 64 cm^2
- C) 48 cm^2
- D) 32 cm^2

30. Constructing a Histogram

(Diagram: Data for a histogram)

Draw a histogram based on the data provided.

31. Identifying Quadrilaterals

Which of the following is a parallelogram?

(Diagram: Various quadrilaterals labeled)

32. Finding Roots

What is the square root of 49?

- A) 5
- B) 6
- C) 7
- D) 8

33. Percent Increase

If a product costs Rs. 200 and increases by 10%, what is the new price?

- A) Rs. 210
- B) Rs. 220
- C) Rs. 240
- D) Rs. 200

34. Finding Circumference

What is the circumference of a circle with a diameter of 10 cm?

(Diagram: Circle with diameter labeled)

- A) 31.4 cm
- B) 20 cm
- C) 15.7 cm
- D) None of these

35. Order of Operations

What is the value of $2+3 \times 4 + 3 \times 4 + 3 \times 4$?

- A) 14
- B) 20
- C) 18
- D) 26

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36. Finding the Mode

Find the mode of the numbers: 2, 3, 4, 4, 5, 6.

- A) 4
- B) 5
- C) 6
- D) 3

37. Measurement Conversion

Convert 5 kilometers to meters.

- A) 500 m
- B) 5000 m
- C) 50 m
- D) None of these

38. Finding Complementary Angles

What is the complementary angle of 30° ?

- A) 60°
- B) 90°
- C) 120°
- D) None of these

39. Equations

Solve for xxx: $3x-5=10$ $3x - 5 = 10$ $3x-5=10$.

- A) 5
- B) 6
- C) 7
- D) 8

40. Order of Operations

What is $(8+4)\div 2\times 3(8+4)\div 2\times 3$?

- A) 18
- B) 12
- C) 24
- D) None of these

41. Identifying 3D Shapes

(Diagram: Various 3D shapes like cube, cylinder, and sphere)
Which shape has no edges?

42. Identifying Patterns

What is the next number in the series: 2, 4, 8, 16?

- A) 24
- B) 32
- C) 40
- D) None of these

43. Finding the Range

Find the range of the following numbers: 10, 20, 5, 30.

- A) 25
- B) 30
- C) 20
- D) None of these

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44. Understanding Variables

If $y=2x+3$ and $x=4$, what is y ?

- A) 8
- B) 10
- C) 11
- D) 14

45. Comparing Numbers

Which is greater: 3^4 or 2^3 ?

- A) 3^4
- B) 2^3
- C) Both are equal
- D) None of these

