

YEAR 7 MATHEMATICS SELF ASSESSMENT TEST



“Test yourself or your child at home, and reach out to us only if you need extra help. Otherwise, give yourself or your child a pat on the back and best of luck for the future!”

Instructions: Answer all questions. All questions are multiple-choice. Some questions require calculations. Calculators may be used where appropriate.

Number & Algebra

1. Simplify: $3x + 5x$

- A) $15x$
 - B) $8x$
 - C) $2x$
 - D) $3x^2$
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2. What is the value of $4^2 + 3^2$?

- A) 25
 - B) 12
 - C) 16
 - D) 40
-

3. Solve: $2x = 18$

- A) 6
 - B) 8
 - C) 9
 - D) 10
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4. Which number is a prime?

- A) 21
 - B) 17
 - C) 25
 - D) 35
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5. Expand: $(x + 4)(x + 2)$

- A) $x^2 + 6x + 8$
 - B) $x^2 + 2x + 4$
 - C) $x^2 + 8x + 6$
 - D) $x^2 + 4x + 2$
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6. If $2y + 5 = 15$, what is y ?

- A) 4
 - B) 5
 - C) 7
 - D) 10
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7. Which fraction is equal to $3/4$?

- A) $9/12$
- B) $5/8$

- C) $\frac{6}{10}$
D) $\frac{12}{20}$
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8. What is 25% of 160?

- A) 20
B) 25
C) 30
D) 40
-

9. Write 0.45 as a fraction in simplest form.

- A) $\frac{9}{20}$
B) $\frac{45}{100}$
C) $\frac{5}{9}$
D) $\frac{45}{1000}$
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10. Which of these is NOT a multiple of 6?

- A) 18
B) 24
C) 32
D) 42
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Measurement & Geometry

11. The perimeter of a square with side length 12 cm is:

- A) 24 cm
B) 36 cm
C) 48 cm
D) 60 cm
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12. The area of a rectangle with length 10 cm and width 6 cm is:

- A) 16 cm^2
B) 60 cm^2
C) 100 cm^2
D) 600 cm^2
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13. The value of the angle in a straight line is:

- A) 45°
B) 90°
C) 180°
D) 360°

14. A triangle with angles 50° and 60° has a missing angle of:

- A) 40°

- B) 50°
 - C) 60°
 - D) 70°
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15. Convert 2.5 m into cm.

- A) 25 cm
 - B) 250 cm
 - C) 2500 cm
 - D) 25,000 cm
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16. A cube has side length 5 cm. Its volume is:

- A) 25 cm^3
 - B) 100 cm^3
 - C) 125 cm^3
 - D) 150 cm^3
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17. A circle has radius 7 cm. What is its diameter?

- A) 3.5 cm
 - B) 7 cm
 - C) 14 cm
 - D) 28 cm
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18. The sum of interior angles in a quadrilateral is:

- A) 180°
 - B) 270°
 - C) 360°
 - D) 540°
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19. The distance around a circle is called:

- A) Radius
 - B) Diameter
 - C) Area
 - D) Circumference
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20. Which of these shapes has exactly one pair of parallel sides?

- A) Square
 - B) Rectangle
 - C) Trapezium
 - D) Parallelogram
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Statistics & Probability

21. The mode of the numbers {2, 4, 6, 6, 7, 8} is:

- A) 2
- B) 4
- C) 6
- D) 7

22. The median of {12, 7, 8, 10, 9} is:

- A) 7
- B) 9
- C) 10
- D) 12

23. The probability of getting a tail when tossing a coin is:

- A) 0
- B) 0.25
- C) 0.5
- D) 1

24. A die is rolled. What is the probability of rolling a number greater than 4?

- A) $\frac{1}{6}$

B) $\frac{2}{6}$

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

D) $\frac{4}{6}$

25. A student scored 20, 25, and 30 in three tests. The mean score is:

- A) 20
- B) 25
- C) 27
- D) 30

26. The range of {5, 8, 10, 15, 20} is:

- A) 10
- B) 15
- C) 20
- D) 25

27. If a spinner has 4 equal sections, the probability of landing on red is:

- A) $\frac{1}{2}$
- B) $\frac{1}{3}$
- C) $\frac{1}{4}$

D) $\frac{1}{5}$

Word Problems

28. Which graph is best for showing percentages?

- A) Bar graph
 - B) Line graph
 - C) Pie chart
 - D) Histogram
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41. A car travels 60 km in 1 hour. How far will it travel in 2.5 hours?

- A) 100 km
 - B) 120 km
 - C) 130 km
 - D) 150 km
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29. In a survey, 15 students like soccer, 10 like cricket, and 5 like tennis. How many students were surveyed?

- A) 15
 - B) 20
 - C) 25
 - D) 30
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42. A packet has 12 pens. If 8 packets are bought, how many pens are there in total?

- A) 96
 - B) 100
 - C) 108
 - D) 120
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30. A bag has 3 red and 7 blue marbles. Probability of picking a blue marble is:

- A) $\frac{3}{10}$
 - B) $\frac{7}{10}$
 - C) $\frac{1}{2}$
 - D) $\frac{10}{7}$
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43. A book costs \$8.50. How much will 4 books cost?

- A) \$32
 - B) \$33
 - C) \$34
 - D) \$35
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44. A class has 24 students. If $\frac{2}{3}$ are girls, how many are girls?

- A) 8
 - B) 12
 - C) 16
 - D) 18
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45. A train leaves at 7:45 am and arrives at 10:15 am. How long was the journey?

- A) 2 hr
 - B) 2 hr 15 min
 - C) 2 hr 30 min
 - D) 3 hr
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46. A shop gives 20% discount on \$50. What is the discount?

- A) \$5
 - B) \$10
 - C) \$15
 - D) \$20
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47. A rectangle has length 12 cm and width 5 cm. Find its perimeter.

- A) 24 cm

- B) 30 cm
 - C) 34 cm
 - D) 40 cm
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48. The average of 6, 10, 14, and 20 is:

- A) 10
 - B) 12.5
 - C) 13
 - D) 15
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49. Which number is divisible by both 3 and 5?

- A) 25
 - B) 30
 - C) 35
 - D) 45
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50. The missing number in the sequence 2, 4, 8, 16, __, 64 is:

- A) 20
- B) 24
- C) 32
- D) 40