

XPERTSTEM Mathematics Sample Test for Division 2 (Grade 5-6)

1) Is the number 315 divisible by both 3 and 5?

- A) Yes, divisible by both
- B) No divisible 3 or 5
- C) Only by 3
- D) Only by 5

2) If all squares are rectangles but not all rectangles are squares, is the following statement true?

"All rectangles are squares."

- A) True
- B) False
- C) Sometimes true
- D) Cannot be determined

3) Which of the following is a prime number?

- A) 21
- B) 23
- C) 27
- D) 30

4) What is $12,45 + 8,6 - 3,75$?

- A) 17.3
- B) 18.65
- C) 21.05
- D) 22.3

5) Convert $7\frac{3}{4}$ to an improper fraction.

- A) $\frac{31}{4}$
- B) $\frac{29}{4}$
- C) $\frac{28}{4}$
- D) $\frac{27}{4}$

6) What is the greatest common factor (GCF) of 36 and 60?

- A) 6
- B) 12
- C) 18
- D) 24

7) The least common multiple (LCM) of 8 and 12 is:

- A) 24
- B) 36
- C) 48
- D) 96

8) Which number is divisible by 13?

- A) 234
- B) 273
- C) 299
- D) 315

9) What is the prime factorization of 84?

- A) $2^2 \times 3 \times 7$
- B) $2 \times 3 \times 7$
- C) $2^3 \times 7$
- D) $3^2 \times 7$

10) Solve $4\frac{1}{3} - 2\frac{2}{3}$.

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

11) What is the mean of the numbers 5, 8, 12, 15, and 20?

- A) 10
- B) 12
- C) 13
- D) 14

12) 25% of 240 is:

- A) 50
- B) 60
- C) 75
- D) 80

13) The ratio of boys to girls in a class is 3:4. If there are 28 students in the class, how many are girls?

- A) 12
- B) 14
- C) 16
- D) 18

14) Solve for x if $3x + 5 = 20$.

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

15) The side length of a square is 6 cm. What is its perimeter?

- A) 24 cm
- B) 18 cm
- C) 36 cm
- D) 12 cm

16) Find the median of the numbers 3, 7, 9, 12, and 15.

- A) 7
- B) 9
- C) 12
- D) 15

17) A book was originally priced at \$20 but is now sold for \$25. What is the percentage increase?

- A) 20%
- B) 25%
- C) 30%
- D) 35%

18) Which ratio is equivalent to 5:8?

- A) 10:16
- B) 8:5
- C) 15:24
- D) Both a and c

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19) A number is doubled and then decreased by 8 to result in 12. What is the number?

- A) 10
- B) 12
- C) 8
- D) 6

20) A rectangle has a length of 10 cm and a width of 7 cm. What is its perimeter?

- A) 34 cm
- B) 30 cm
- C) 28 cm
- D) 17 cm

21) A triangle has a base of 8 cm and a height of 5 cm. What is its area?

- A) 20 cm^2
- B) 30 cm^2
- C) 40 cm^2
- D) 50 cm^2

22) Which statement is true about parallelograms?

- A) Opposite sides are equal
- B) All angles are 90°
- C) Diagonals are always equal
- D) Opposite sides are not parallel

23) An angle measuring 125° is:

- A) Acute
- B) Right
- C) Obtuse
- D) Straight

24) If the side of a cube is 4 cm, its volume is:

- A) 64 cm^3
- B) 16 cm^3
- C) 48 cm^3
- D) 32 cm^3

25) How many lines of symmetry does a regular hexagon have?

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

26) A square has a side length of 9 cm. What is its area?

- A) 18 cm^2
- B) 27 cm^2
- C) 81 cm^2
- D) 72 cm^2

27) Which of the following is true for rectangles?

- A) All sides are equal
- B) Opposite sides are equal, and all angles are 90°
- C) Opposite sides are equal, but angles vary
- D) Only one pair of sides is parallel

28) What is the sum of the interior angles of a triangle?

- A) 90°
- B) 180°
- C) 360°
- D) 270°

29) A cuboid has dimensions of 4 cm, 5 cm, and 6 cm. What is its volume?

- A) 60 cm^3
- B) 120 cm^3
- C) 100 cm^3
- D) 240 cm^3

30) How many lines of symmetry does a rectangle have?

- A) 2
- B) 4
- C) 6
- D) None