

Pre-Algebra Mastery Challenge

Pre-Algebra · Answer Key · 18 Questions

1. What is the prime factorization of 72?

- A) $2^3 \times 3^2$**
- B) $2^2 \times 3^3$
- C) 24×3
- D) 2×34

2. If $x + 7 = 15$, what is the value of x ?

- A) 8**
- B) 22
- C) 10
- D) 6

3. What is the greatest common divisor (GCD) of 48 and 64?

- A) 16**
- B) 8
- C) 12
- D) 4

4. What is the area of a rectangle with a length of 9 cm and a width of 5 cm?

- A) 45 cm^2**
- B) 14 cm^2
- C) 28 cm^2
- D) 19 cm^2

5. If a number is divisible by both 3 and 5, it is also divisible by:

- A) 15**
- B) 8
- C) 2
- D) 6

6. What is the value of $5^2 + 3^3$?

- A) 52**
- B) 34
- C) 15
- D) 32

7. Solve for y: $3y - 4 = 11$

A) 5

B) 7

C) 15

D) 3

8. What is the least common multiple (LCM) of 6 and 8?

A) 24

B) 12

C) 48

D) 2

9. What is the perimeter of a square with a side length of 7 meters?

A) 28 meters

B) 49 meters

C) 14 meters

D) 21 meters

10. If a recipe calls for 2 cups of flour for every 3 eggs, how many eggs are needed for 6 cups of flour?

A) 9 eggs

B) 4 eggs

C) 12 eggs

D) 3 eggs

11. What is the value of the expression $10 \div 2 + (5 \times 3)$?

A) 20

B) 18

C) 35

D) 25

12. What is the absolute value of -12?

A) 12

B) -12

C) 0

D) 1

13. If the ratio of boys to girls in a class is 3:4, and there are 12 boys, how many girls are there?

A) 16 girls

B) 9 girls

C) 7 girls

D) 48 girls

14. What is the volume of a cube with a side length of 3 inches?

A) 27 cubic inches

B) 9 cubic inches

C) 18 cubic inches

D) 36 cubic inches

15. What is the next number in the sequence: 5, 10, 20, 40, ...?

A) 80

B) 60

C) 160

D) 45

16. If 25% of a number is 10, what is the number?

A) 40

B) 250

C) 15

D) 35

17. What is the value of $4(x + 2)$ when $x = 3$?

A) 20

B) 12

C) 10

D) 28

18. What is the average of the numbers 10, 15, and 20?

A) 15

B) 10

C) 20

D) 45