

Pre-Algebra Core Concepts

Mathematics · Answer Key · 18 Questions

1. What is the value of 3^4 ?

- A) 12
- B) 27
- C) 81**
- D) 64

2. Which property is represented by the equation $a(b + c) = ab + ac$?

- A) Commutative
- B) Associative
- C) Distributive**
- D) Identity

3. What is the result of simplifying $5x + 3y - 2x + 4y$?

- A) $3x + 7y$**
- B) $7x + 7y$
- C) $3x - y$
- D) $8xy$

4. What is the correct order of operations according to BODMAS?

- A) Brackets, Orders, Division, Multiplication, Addition, Subtraction**
- B) Brackets, Operations, Division, Multiplication, Addition, Subtraction
- C) Base, Orders, Division, Multiplication, Addition, Subtraction
- D) Brackets, Orders, Division, Modulo, Addition, Subtraction

5. Which of the following is a prime number?

- A) 1
- B) 9
- C) 15
- D) 17**

6. What is the value of x if $2x - 5 = 11$?

- A) 3
- B) 8**
- C) 7
- D) 6

7. What is the greatest common factor (GCF) of 12 and 18?

- A) 2
- B) 3
- C) 6**
- D) 9

8. What is the product of -4 and -7?

- A) -28
- B) 28**
- C) -11
- D) 11

9. Which expression is equivalent to 10^{-2} ?

- A) -100
- B) 0.01**
- C) $\frac{1}{20}$
- D) -0.01

10. What is the square root of 144?

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

11. How is 0.005 expressed in scientific notation?

- A) 5×10^{-2}
- B) 5×10^{-3}**
- C) 5×10^{-4}
- D) 0.5×10^{-2}

12. Solve for x: $\frac{x}{4} = 12$

- A) 3
- B) 16
- C) 48**
- D) 36

13. What is the absolute value of -15?

- A) -15
- B) 0
- C) 15**
- D) $\frac{1}{15}$

14. Which fraction is equivalent to 0.75?

A) $\frac{1}{3}$

B) $\frac{2}{5}$

C) $\frac{3}{4}$

D) $\frac{7}{5}$

15. What is the sum of the interior angles of a triangle?

A) 90 degrees

B) 180 degrees

C) 270 degrees

D) 360 degrees

16. Which of these represents a rational number?

A) π

B) $\sqrt{2}$

C) 0.5

D) e

17. What is 20% of 80?

A) 10

B) 12

C) 16

D) 20

18. Evaluate $2x^2$ when $x = 3$.

A) 12

B) 18

C) 36

D) 6