

**Multiple choice questions related to determining math pattern rules for
subsequent elements:**

1. What is the next number in the sequence: 2, 4, 6, 8, ___?
 - A) 9
 - B) 10
 - C) 12
 - D) 14

2. What is the missing number in the sequence: 3, 6, 12, ___, 48?
 - A) 18
 - B) 24
 - C) 30
 - D) 36

3. Find the next number in the series: 1, 4, 9, 16, ___
 - A) 25
 - B) 30
 - C) 36
 - D) 49

4. If the pattern is +3, +5, +7, what is the next number after 15?
 - A) 20
 - B) 22
 - C) 24
 - D) 26

5. What is the missing number in the sequence: 5, 10, ___, 20, 40?
 - A) 15
 - B) 18

C) 25

D) 30

6. What is the next number in the sequence: 1, 4, 9, 16, 25, ___?

A) 30

B) 36

C) 42

D) 49

7. Lucy buys a new book every month. The cost of the books follows a pattern: \$10, \$15, \$20, \$25, ___. What is the cost of the book in the sixth month?

A) \$30

B) \$35

C) \$40

D) \$45

8. A farmer notices that the number of apples on each tree in his orchard is increasing by 5 every week. If there were 20 apples on the tree last week, how many apples will be on the tree in 6 weeks?

A) 50

B) 70

C) 80

D) 90

9. Sam is stacking boxes in a pattern. He starts with 3 boxes in the first row, then adds 2 more boxes in the second row, and continues the pattern by adding 2 more boxes in each subsequent row. If he continues this pattern, how many boxes will be in the 5th row?

A) 11

B) 12

C) 13

D) 14

10. A pattern of numbers is formed by adding 3 to the previous number. If the pattern starts with 5, what is the 8th number in the sequence?

A) 23

B) 26

C) 29

D) 32

11. A company sells a product at \$10, \$15, \$20, \$25, \$30, ___. If the pattern continues, what will be the price of the product after the sixth increase?

A) \$35

B) \$40

C) \$45

D) \$50

12. A bookshelf has 5 shelves, and each shelf can hold 8 books. If the bookshelf is currently empty, how many books need to be added in total to fill the bookshelf completely?

A) 20 books

B) 30 books

C) 40 books

D) 50 books

13. A bakery sells a total of 250 loaves of bread per day. They sell a combination of whole wheat and white bread, with whole wheat bread selling for \$2 each and white

bread selling for \$1.50 each. If the total daily revenue from bread sales is \$425, how many loaves of whole wheat bread are sold daily?

- A) 50 loaves
- B) 75 loaves
- C) 100 loaves
- D) 125 loaves

14. A person invests \$1,000 in a savings account that earns a 5% annual interest rate, compounded annually. How much money will be in the account after 5 years?

- A) \$1,250
- B) \$1,500
- C) \$1,762.50
- D) \$2,000

15. A car travels 250 miles on Monday, 275 miles on Tuesday, and 300 miles on Wednesday. If the pattern continues, how many miles will the car travel on Friday?

- A) 325 miles
- B) 350 miles
- C) 375 miles
- D) 400 miles

16. A person saves \$5 on day 1, \$10 on day 2, \$15 on day 3, and so on. If this pattern continues, how much money will the person save on day 20?

- A) \$50
- B) \$75
- C) \$100
- D) \$200

17. Simplify the expression: $2x + 5 + 3x - 2$

A) $5x + 3$

B) $5x - 3$

C) $2x + 3$

D) $2x - 3$

18. If Sally can paint a room in 4 hours, and John can paint the same room in 6 hours, how long will it take for both of them to paint the room together?

A) 2 hours

B) 3 hours

C) 4 hours

D) 6 hours

19. Solve the equation: $x + 2 = 7$

A) $x = 5$

B) $x = 9$

C) $x = 3$

D) $x = 1$

20. A book costs \$15. If a 10% discount is applied, how much will the book cost after the discount?

A) \$13.50

B) \$14.50

C) \$15.50

D) \$16.50

21. Simplify the expression: $(3x + 2) + (2x - 3)$

A) $5x - 1$

B) $5x + 1$

C) $3x + 1$

D) $3x - 1$

22. If a car travels 250 miles in 5 hours, how many miles will it travel in 8 hours at the same rate?

A) 400 miles

B) 450 miles

C) 500 miles

D) 550 miles

23. Solve the equation: $2x - 3 = 5$

A) $x = 2$

B) $x = 3$

C) $x = 4$

D) $x = 5$

24. A bakery sells 250 loaves of bread at \$2 each. How much money does the bakery make in total?

A) \$400

B) \$450

C) \$500

D) \$550

25. Simplify the expression: $x^2 + 4x - 5$

A) $(x + 5)(x - 1)$

B) $(x - 5)(x + 1)$

C) $(x + 4)(x - 1)$

D) $(x - 4)(x + 1)$

26. If a person invests \$1,000 at a 5% annual interest rate, how much money will they have after 2 years?

A) \$1,050

B) \$1,100

C) \$1,150

D) \$1,200

27. Solve the equation: $x/2 + 3 = 5$

A) $x = 2$

B) $x = 4$

C) $x = 6$

D) $x = 8$

28. A car rental company charges a base fee of \$20 plus an additional \$0.25 per mile.

How much will a 100-mile trip cost?

A) \$25

B) \$30

C) \$35

D) \$40

29. Simplify the expression: $2(3x - 2) + x$

A) $6x - 4$

B) $6x + 4$

C) $5x - 4$

D) $5x + 4$

30. If a person can walk 3 miles in 45 minutes, how many miles can they walk in 2 hours?

A) 4 miles

B) 5 miles

C) 6 miles

D) 8 miles