

Algebra

Question 1.

An is a condition on a variable.

- (a) expression
- (b) equation
- (c) equal
- (d) none of these

Answer: (b) equation

Question 2.

What do literals usually represent?

- (a) Known quantities
- (b) Variables
- (c) Constants
- (d) Depends on the problem

Answer: (b) Variables

Question 3.

Which of the following is an equation?

- (a) $2x + 3 = 5$
- (b) $2x + 3 < 5$
- (c) $2x + 3 > 5$
- (d) $2x + 3 \leq 5$

Answer: (a) $2x + 3 = 5$

Question 4.

Give expression for 25 added to r.

- (a) $25 + r$
- (b) $25 - r$

- (c) $25r$
- (d) None of these

Answer: (a) $25 + r$

Question 5.

Pick out the solution from the values given in the bracket next to each equation. $p - 5 = 5$ (0, 10, 5 - 5)

- (a) 0
- (b) 5
- (c) -5
- (d) 10

Answer: (d) 10

Question 6.

A basket has x mangoes, how many mangoes are there in 5 baskets?

- (a) 5
- (b) $5x$
- (c) $6x$
- (d) x

Answer: (b) $5x$

Question 7.

The expression for the statement: "5 times the sum of x and y " is

- (a) $5 + x + y$
- (b) $5 - x - y$
- (c) $5x(x + y)$
- (d) None of these

Answer: (c) $5x(x + y)$

Question 8.

$5 \div x$ has the operation

- (a) Addition
- (b) Subtraction
- (c) Multiplication
- (d) Division

Answer: (d) Division

Question 9.

Perimeter of the square, whose each side is 'n' cm is

- (a) $4n$
- (b) $2n$
- (c) $3n$
- (d) None of these

Answer: (a) $4n$

Question 10.

$x + 5 = -11$. Then $x = ?$

- (a) $x = -14$
- (b) $x = -16$
- (c) $x = -6$
- (d) None of these

Answer: (b) $x = -16$

Question 11.

Which of the following is the perimeter of a regular hexagon of side 's' units?

- (a) $6s$ units
- (b) $12s$ units
- (c) $6s^2$ sq units
- (d) $-6s$ units

Answer: (a) $6s$ units

Question 12.

Form equation: Half of a number is 12.

- (a) $+x=25$
- (b) $x \times x=12$
- (c) $+$
- (d) none of these

Answer: (b) $\times x=12$

Question 13.

Form equation: A number when added to 7 gives 10 as answer.

- (a) $x + 7 = 10$
- (b) $x + 10 = 7$
- (c) $x - 7 = 10$
- (d) None of these

Answer: (a) $x + 7 = 10$

Question 14.

$x - 12 = -20$. Then $x = ?$

- (a) $x = -20$
- (b) $x = 4$
- (c) $x =$
- (d) None of these

Answer: (b) $x = 4$

Question 15.

What is the method of finding a solution by trying out various values for the variable called?

- (a) Error method
- (b) Trial and error method
- (c) Testing method
- (d) Checking method

Answer: (b) Trial and error method

Question 16.

Form equation: Twice a number added to 12 gives 27.

- (a) $2x - 12 = 27$
- (b) $2x + 12 = 27$
- (c) $= 27$
- (d) None of these

Answer: (b) $2x + 12 = 27$

Question 17.

$2m - 3$ has the operation

- (a) Addition
- (b) Subtraction

- (c) Multiplication
- (d) Division

Answer: (b) Subtraction

Question 18.

Which of the following does $2n - 1$ represent?

- (a) 1 subtracted from the product of n and 2.
- (b) The difference of two times n and 2.
- (c) $2n$ added to 1.
- (d) n subtracted from 2.

Answer: (a) 1 subtracted from the product of n and 2.

Question 19.

Form equation: Product of variable x and itself is 64.

- (a) $= 64$
- (b) $x + x = 64$
- (c) $x = 64$
- (d) None of these

Answer: (a) $= 64$

Question 20.

The expression for the statement: “5 more than a number” is

- (a) $5 - x$
- (b) $5 + x$
- (c) $5x$
- (d) $5 \div x$

Answer: (b) $5 + x$

Question 21.

Identify the operation $2m + 5$.

- (a) Addition
- (b) Subtraction
- (c) Multiplication
- (d) Division

Answer: (a) Addition

Question 22.

Perimeter of an equilateral triangle, whose each side is 'x' unit is

- (a) $4x$
- (b) $2x$
- (c) $3 + x$
- (d) $3x$

Answer: (d) $3x$

Question 23.

$x - 1 = -7$. Then $x = ?$

- (a) $x = 6$
- (b) $x = 8$
- (c) $x = -6$
- (d) $x = -7$

Answer: (c) $x = -6$

Question 24.

Perimeter of an _____ $= 3 \times$ length of a side

- (a) equilateral triangle
- (b) isosceles triangle
- (c) right-angled triangle
- (d) None of these

Answer: (a) equilateral triangle

Question 25.

$y - 7 = -6$. Then $y = ?$

- (a) $y = 13$
- (b) $y =$
- (c) $y = 42$
- (d) $y = 1$

Answer: (d) $y = 1$

Question 26.

Number of matchsticks required to make a pattern of "U"

- (a) 4

- (b) 5
- (c) 3
- (d) 6

Answer: (c) 3

Question 27.

Form equation: One fifth of x added to x get 25.

- (a) $-x = 25$
- (b) $+x = 25$
- (c) $5x + x = 25$
- (d) $x + = 25$

Answer: (b) $+x = 25$

Question 28.

The expression for the statement: “The product of x and y added to 7” is

- (a) $x + y + 7$
- (b) $x - y + 7$
- (c) $xy + 7$
- (d) None of these

Answer: (c) $xy + 7$

Question 29.

Ramu’s father is thrice as old as Ramu. If father’s age is 45 years, how old is Ramu?

- (a) 45 years
- (b) 30 years
- (c) 15 years
- (d) 10 years

Answer: (c) 15 years

Question 30.

Pick out the solution from the values given in the bracket next to each equation. $x + 4 = 2$ (– 2, 0, 2, 4)

- (a) -2
- (b) 4
- (c) 2
- (d) 0

Answer: (a) -2

Question 31.

$x + 7 = 12$. Then $x = ?$

- (a) $x = 3$
- (b) $x = 4$
- (c) $x = 5$
- (d) $x = 6$

Answer: (c) $x = 5$

Question 32.

The expression for the statement: “5 less than x is 6” is

- (a) $x - 6 = 5$
- (b) $x - 5 = 6$
- (c) $x + 5 = 6$
- (d) None of these

Answer: (b) $x - 5 = 6$

Question 33.

Take Meena’s present age to be y years, what will be her age 5 years from now?

- (a) $y + 5$
- (b)
- (c) $y - 5$
- (d) $5y$

Answer: (a) $y + 5$

Question 34.

Number of matchsticks required to make a pattern of “A”

- (a) 4
- (b) 3
- (c) 6
- (d) 5

Answer: (b) 3

Question 35.

7 p has the operation

- (a) Addition
- (b) Subtraction
- (c) Multiplication
- (d) Division

Answer: (c) Multiplication

Question 36.

The expression for the statement: "Five times x added to y" is

- (a) $5x + y$
- (b) $x + 5y$
- (c) $x - 5y$
- (d) None of these

Answer: (b) $x + 5y$

Question 37.

The side of an equilateral triangle is shown by l. Express the perimeter of the equilateral triangle using l.

- (a) $3l$
- (b) $2l$
- (c) l
- (d) None of these

Answer: (a) $3l$

Question 38.

Which out of the following are expressions with numbers only?

- (a) $(7 \times 20) - (5 \times 10) - 45$
- (b) $3x$
- (c) $(7 \times 20) - 8z$
- (d) $5 - 5n$

Answer: (a) $(7 \times 20) - (5 \times 10) - 45$

Question 39.

Choose a value of 'a' that satisfies the equation $6a = -30$.

- (a) 5

- (b) 30
- (c) -5
- (d) 10

Answer: (c) -5

Question 40.

The expression for the statement: “7 less than y” is

- (a) $7 + y$
- (b) $7 - y$
- (c) $y - 7$
- (d) None of these

Answer: (c) $y - 7$

Question 41.

The expression for the statement: “y multiplied by 10 and then 7 added to product” is

- (a) $7y - 10$
- (b) $10y - 7$
- (c) $10y + 7$
- (d) None of these

Answer: (c) $10y + 7$

Question 42.

Find the length of a side of an equilateral triangular garden whose perimeter is 66 m.

- (a) 66 m
- (b) 11 m
- (c) 3 m
- (d) 22 m

Answer: (d) 22 m

Question 43.

The _____ of the variable in an equation which satisfies the equation is called a solution to the equation.

- (a) value
- (b) term
- (c) factor
- (d) None of these

Answer: (a) value

Question 44.

A number is multiplied by 6 and 12 is added to the product. The result is 84. What is the number?

- (a) -12
- (b) 72
- (c) 12
- (d) -72

Answer: (c) 12

Fill in the blanks:

1. $= 9$ then $x = \dots\dots\dots$

Answer: 45

2. $x - 12 = -8$ then $x = \dots\dots\dots$

Answer: 4

3. $10y + 2 = -18$ then $y = \dots\dots\dots$

Answer: -2

4. $x - 1 = -7$ then $x = \dots\dots\dots$

Answer: -6

5. $2x + 7 = 10$ then $x = \dots\dots\dots$

Answer:

6. $x + 3 = 4$ then $x = \dots\dots\dots$

Answer: 1

7. $y - 2 = 7$ then $y = \dots\dots\dots$

Answer: 9

8. $3y = 5$ then $y = \dots\dots\dots$

Answer:

9. $12x = 60$ then $x = \dots\dots\dots$

Answer: 5

10. $x / 5 = 6$ then $x = \dots\dots\dots$

Answer: 30

Match the following:

1.

(a) $Z - 1 = -3$	(i) $p - 17$
(b) 7 added to x	(ii) $x = 6$
(c) 17 subtracted from p	(iii) $-9z + 15$
(d) y divided by 7	(iv) $p = 7$
(e) z multiplied by -9 & result added to 15	(v)
(f) $4 + x = 10$	(vi) $z = -2$
(g) $18 = p + 11$	(vii) $2y + 7 = 23$
(h) Twice a number plus 7 is 23	(viii) $7 + x$
(i) $x^2 = 49$	(ix) $a = 5$
(j) $11a = 55$	(x) $x = 7$

Answer:

(a) $Z - 1 = -3$	(vi) $z = -2$
(b) 7 added to x	(viii) $7 + x$
(c) 17 subtracted from p	(i) $p - 17$

(d) y divided by 7	(v)
(e) z multiplied by -9 & result added to 15	(iii) $-9z + 15$
(f) $4 + x = 10$	(ii) $x = 6$
(g) $18 = p + 11$	(iv) $p = 7$
(h) Twice a number plus 7 is 23	(vii) $2y + 7 = 23$
(i) $x^2 = 49$	(x) $x = 7$
(j) $11a = 55$	(ix) $a = 5$