

Algebra I

Algebra for class VI

Definitions

- Variable – A variable is a letter or symbol that represents a number (unknown quantity).
- $8 + n = 12$

Definitions

- A variable can use any letter of the alphabet.
- $n + 5$
- $x - 7$
- $w - 25$

Definitions

- Algebraic expression – a group of numbers, symbols, and variables that express an operation or a series of operations.
- $m + 8$
- $r - 3$

Definitions

- Evaluate an algebraic expression –
To find the value of an algebraic expression by substituting numbers for variables.
- $m + 8$ $m = 2$ $2 + 8 = 10$
- $r - 3$ $r = 5$ $5 - 3 = 2$

Definitions

- Simplify – Combine like terms and complete all operations

$$m = 2$$

- $m + 8 + m$ $2m + 8$

- $(2 \times 2) + 8$ $4 + 8 = 12$

Words That Lead to Addition



- Sum
- More than
- Increased
- Plus
- Altogether

Words That Lead to Subtraction



- Decreased
- Less
- Difference
- Minus
- How many more

Write Algebraic Expressions for These Word Phrases

- Ten more than a number $n + 10$
- A number decrease by 5 $w - 5$
- 6 less than a number $x - 6$
- A number increased by 8 $n + 8$
- The sum of a number & 9 $n + 9$
- 4 more than a number $y + 4$

Write Algebraic Expressions for These Word Phrases

- A number s plus 2 $s + 2$
- A number decrease by 1 $k - 1$
- 31 less than a number $x - 31$
- A number b increased by 7 $b + 7$
- The sum of a number & 6 $n + 6$
- 9 more than a number $z + 9$

Evaluate each algebraic expression when $x = 10$

• $x + 8$ 18

• $x + 49$ 59

• $x + x$ 20

• $x - x$ 0

• $x - 7$ 3

• $42 - x$ 32

Complete This Table

n	$n - 3$
5	2
10	7
21	18
32	29

Complete This Table

x	$x + 6$
5	11
10	16
21	27
32	38

Write an Algebraic Expression for These Situations

- Shams's brother is 2 years younger than Scott

$$s - 2$$

- The sum of two numbers is 12

$$v + c = 12$$

- The difference between two numbers is 5

$$m - n = 5$$