

1.1 Introduction to Algebraic Terminology

variable - letter used to represent a number

term - expression with numbers, variables or both.
using multiplication, division or both

Ex: $2ab$, $\frac{4}{xy}$

constant - term with no variables

Ex: 8, -15

coefficient - numerical part of a term
- all terms have coefficients

Ex: $2ab$ coefficient: 2 $-3x$ C: -3 pqr C: 1

factor - term that divides into the given term.

Ex $2ab$ Factors: 2, a, b, ab, 2a, 2b, 2ab

Algebraic expressions - No =

• numbers, variables, and operations

$$2ab + 4$$

Algebraic equations - =

• numbers, variables, operations and =

$$2ab + 4ab = 3c$$

Algebraic inequalities - has an inequality sign ($<$, $>$, $\leq$, $\geq$)

• number, variables, operations and an inequality

$$2x + 4 < 5 \quad 3x + y \geq 2z - 1$$

Examples:

For each term, name the coefficient and variable(s).

- | | | |
|---------|-----------|--------|
| 1. $4x$ | 2. $-4cd$ | 3. z |
| C: 4 | C: -4 | C: 1 |
| V: x | V: c, d | V: z |
| 4. 7 | 5. $-gh$ | |
| C: 7 | C: -1 | |
| V: none | V: g, h | |

For each term, name all of the factors.

6. $5mn$ 5, m, n, 5m, 5n, 5mn, mn
7. $2de$ 2, d, e, 2d, 2e, 2de, de

8 - 11 Identify each item as one of the following:

Algebraic Expression No =

Algebraic Equation Has =

Algebraic Inequality $>$, $<$ etc.

8. $3y - 5 < 9$

Algebraic Inequality

9. $2x - 5 = 9(3 - x)$

Algebraic Equation

10. $3b - 8(b - 6) + 2b$

Algebraic Expression

11. $7x = 7x$

Algebraic Equation

HOMEWORK

Worksheet - HW

Introduction to Algebra