Grade 8
Unit 2 Vocabulary

Equations and Inequalities

8.8A, 8.8B, 8.8C, 8.8D

Expression — One or a group of terms and may include variables, constants, operators and grouping symbols.

Math problem <u>without</u> an equal sign.

$$(3 + 5) \times 7$$

Equation — A mathematical statement composed of algebraic and/or numeric expressions set equal to each other.

Math problem <u>with</u> an equal sign.

$$16 - 2t = 5t + 9$$

Inequality — A mathematical statement composed of algebraic and/or numeric expressions set apart by an inequality symbol.

A math problem with a $<$, $>$, $\leq$, or $\geq$ symbol instead of $=$.

$$n + 5 > 10$$
$$n + 5 - 5 > 10 - 5$$
$$n > 5$$

Solution: all numbers greater than 5

Variable — A letter or symbol that represents a number.

A letter in a math problem.

$$1 + x = 3$$

↑
variable

Coefficient — A number that is multiplied by a variable(s).

The number in front of the variable.

$$5x + 3$$

↗ coefficient

Constant — A fixed value that does not appear with a variable(s).

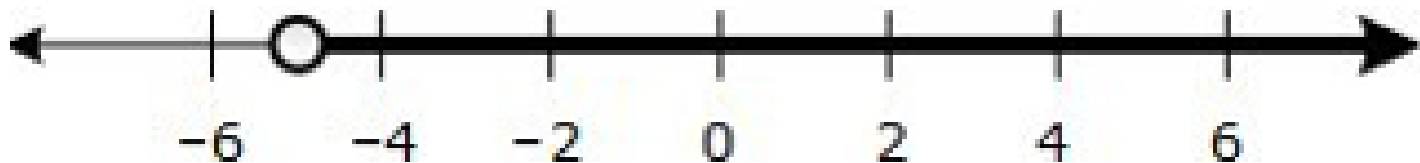The number that is not with a variable.

$$5x + 7 = 12$$

Constants

**Solution set** — A set of all values of the variable(s) that satisfy the equation or inequality.

List of ALL possible answers for a problem.
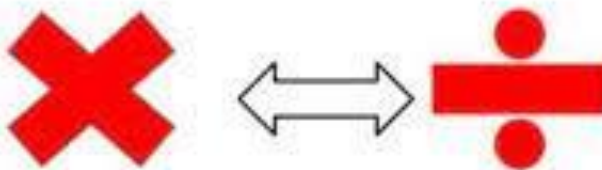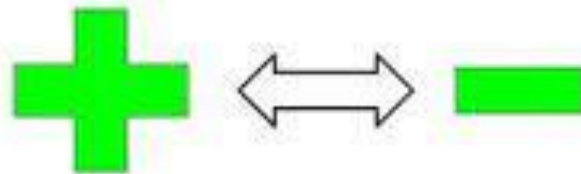$$X > -5$$
$$x = \{-4, -3, -2, \ldots\}$$

Order of Operations - The rules of which calculations are performed first when simplifying an expression.

Steps for solving multi-step problems.

ORDER OF OPERATIONS

The order of operations tells you the sequence to follow when you are performing operations in a mathematical expression.

P	E	M D	A S
1	2	3	4
Parentheses	Exponents	Multiply or Divide	Add or Subtract
( )	a^2	X or ÷	+ or —

Inverse Operations – The operation that reverses the effect of another operation.

Opposite operations

Distributive Property – Says that multiplying a number by a group of numbers added together is the same as doing each multiplication separately.

Multiplying an outside number by each number in parenthesis

DISTRIBUTIVE PROPERTY
EXPLAINED!

$$4(x+3) = 4x+12$$