

1.1 Introduction to Algebra

Need To Know



- What are Algebraic Expressions?
- Translating
 - Expressions
 - Equations

What is Algebra?

They say the only thing that stays the same is change. Our physical world is always changing and varying. In order to understand, interpret and predict the physical world we need a math way to express variableness – Algebra.

Algebra revolutionized the way we interact with the world.

Algebra is the power to translate the real world into mathematics.

This course will give the skills to exercise and understand this power.

Expressions

Definitions:

- A _____ is a letter used to represent a number that can change or that is unknown.
- A _____ is another name for a number.
- An _____ is a math statement with variables and/or numbers, often with operations signs and grouping symbols.
- Examples: $w + 10$, $z/9$, $2y(a + 3)$, 5 , x

Evaluate the Expression

Evaluate means _____.

Evaluate the expressions below:

$$13 - z \text{ when } z = 6$$

$$\frac{5z}{y} \text{ when } z = 9 \text{ and } y = 15$$

Translation

2 more than Bill's age.	$a + b$	
4 less than d.	$a - b$	
The sum of 7 and twice n		
83% of the possible pts.	$ab,$ $a \cdot b$ $a(b)$	
	$a \div b$ a/b $\frac{a}{b}$	

Equations

Definitions:

An _____ is a math sentence that sets two expressions equal.

Examples:

$$2 + 7 = 9$$

$$5(4) = 10$$

$$x - 3 = 9$$

Equations

Definitions:

A _____ is a number for the variable that makes the equation true.

Examples:

Is 7 a solution to $94/y = 12$?

Translate:

15% of all waste is recycled. This is the same as 47 million tons of recycled material. What's the total waste generated?

end