

## Section 1-8 An Introduction to Equations

Students will be able to solve equations using tables and mental math.

Define:

Equation 2 quantities are =  
 $\left. \begin{array}{l} \text{Always} \\ \text{True} \end{array} \right\} \begin{array}{l} 2 = 2 \\ 2 = 10 - 8 \end{array}$       $2 = -7$  never true

An equation that has one or more variables in called **open** because it could be true or false depending on the value of the variables.

$$3x = 21 \text{ open}$$

True, false or open?

$$3y + 6 = 5y - 8 \text{ open}$$

$$16 - 7 = 4 + 5 \text{ True}$$

$\underset{9}{9}$

$$32 \div 8 = 2(3) \text{ False}$$

$4 \neq 6$

Is  $m = -1/2$  a solution to the equation  $6m - 8 = -5$ ? Why?

$$-3 - 8 \stackrel{?}{=} -5$$

$$-11 \stackrel{?}{=} -5 \text{ No}$$

Identify which word shows equality in the following.

The girl's age is 3 times that of her brother's.

Write the equation:

$$\overset{\text{girl's}}{X} = 3 \overset{\text{brother's}}{X}$$

Write an equation:

The length of the ball court at La Venta is 14 times that height of its walls. What is the height of a model that has a length of 49 cm?

Use mental math to solve:

$$x + 7 = 20$$

$$x = 13$$

$$\frac{x}{4} = 25$$

$$x = 100$$

$$p + 15 = -10$$

$$p = -25$$

Use a table to find a solution:

What is the solution of  $25 - 3p = 55$

p	25 - 3p	↑	$25 - 3(-5)$
			$25 + 15$
-2	31		$X = -10$
-5	40		$+30$
-10	55		$25 - 3(-10)$

What is an estimate for the solution to  $3x + 3 = -22$ ?

Share your method.

### Section 1-9 Patterns, Equations, and Graphs

Student will be able to use tables, equations and graphs to describe relationships.

What is an ordered pair?

$(x, y)$

How does an ordered pair relate to the solution to an equation in 2 variables?

Is  $(-2, 3)$  a solution to  $y = 2x + 3$ ?

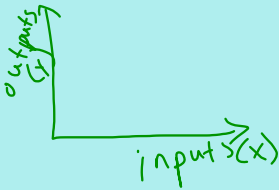
$$3 \stackrel{?}{=} 2(-2) + 3$$

$$3 \stackrel{?}{=} -4 + 3$$

$$3 \neq -1 \text{ No}$$

You can use many different representations to show the relationship between two variables.

Table  $x/y$

Graph 

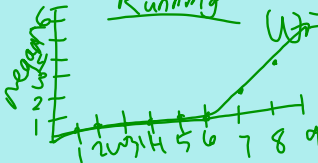
Equation =

Will runs 6 laps before Megan joins him at the track. They then run together at the same pace. How can you represent the relationship between the number of laps Will runs and the number of laps Megan runs in different ways?

Table

w	m
6	0
7	1
8	2

Graph Running



Equ  $w = m + 6$

Turn to page 65 and do #25. It says to use a table and a graph, but instead just pick which one you would like to use.

Review:

Compare and contrast how writing equations in 1 variable is **similar** to those with 2 variables. How are they **different**?

Which is a solution to the equation  
 $y = x + 2$ ?

- a) (3, 5)
- b) (5, 7)
- c) (-2, 0)
- d) none of the above
- e) not enough information

Hwk:

pg 56-57 #10, 22, 26, 32, 38, 50  
62

pg. 64 - 66 #14, 16, 20, 22, 24,  
28, 30, 32

## Attachments

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Sec1.9.notebook