Chapter 7	Equations and Inequalities
Date:	7.4 Writing Equations in Two Variables
Essential Question	How can you write an equation in two variables?

Vocab

Word	Definition
equation in two variables	two quantities that change in relationship to one another
solution of an equation in two variables	ordered pair that makes the equation true (x, y)

Composition Book

7.4 Equations with Two Variables

Tell whether the ordered pair is a solution of the equation.

1) $y = 2x$; $(3, 6)$

(x, y)

$y = 2x$; $(3, 6)$

$6 = 2 \cdot 3$

(3, 6) is a solution of the equation.

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2) $y = 4x - 3$; $(4, 12)$

(x, y)

$y = 4x - 3$; $(4, 12)$

$12 = 4 \cdot 4 - 3$

$12 = 16 - 3$

(4, 12) is not a solution of the equation.

Complete numbers 1 - 2 on your notes page.

Tell whether the ordered pair is a solution of the equation.

1) $y = 7x$; $(2, 21)$

$(2, 21)$

$21 = 7 \cdot 2$

(2, 21) is not a solution to the equation.

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2) $y = 5x + 1$; $(3, 16)$

$(3, 16)$

$16 = 5 \cdot 3 + 1$

(3, 16) is a solution to the equation.

Vocab

Word	Definition
independent variable	the variable that represents the quantity that can change by itself
dependent variable	the value that depends on the other variable

Complete numbers 3 - 4 in your composition book.

3) You earn $8 per hour working part- time at a store. Make and complete a table to show how much you earn over time.

Hours Worked	Money Earned
1	$8
2	$16
3	$24
4	$32
5	$40

What is the independent variable?

hours worked

What is the dependent variable?

money earned

The money you earn DEPENDS on how many hours you work.

4) The equation $y = 128 - 8x$ gives the amount y of milk (in fluid ounces) remaining in a gallon jug after you pour x cups.

a. Identify the independent and dependent variable.

The dependent variable is y, the amount of milk remaining after you pour some cups of milk.

The independent variable is x, the amount of cups you pour.

b. How much milk remains in the jug after you pour 10 cups?

$y = 128 - 8(10)$

$y = 128 - 80$

$y = 48$

48 fluid ounces will remain.