AVID Decades of College Dreams	**Topic/Objective:** 7.1 Introduction to Algebra	**Name:** **Class/Period** **Date:**

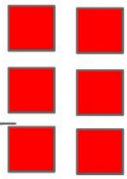
Essential Question (Big Idea):

How do you work backwards?

Questions:	**Notes:**
What does the word Algebra mean? **Who invented Algebra?** **When was Algebra invented?** **How do you solve an Algebra problem?** **Example 1 Addition**	'Al'Gabr' means inverse or opposite Al Kwarizmi 820 AD ? 6 + 3 9 x 2 18 - 7 11 Algebra says, to work backwards, do the inverse operation End with 11. The inverse of -7 is +7. You get 18 The inverse of double is half. Half of 18 is 9 The inverse of +3 is -3 The original number was 6 x + ~~5~~ = 2 - ~~5~~ - 5 x = -3

Example 2
Subtraction

$$x + 2 = -4$$
$$-2 \quad -2$$
$$x = -6$$



Example 3
Multiplication

$$\frac{3}{3}x = \frac{9}{3}$$
$$x = 3$$

Example 4
Division

$$\frac{3x}{3} = \frac{3}{-3}$$
$$x = -9$$

Example 5
Two-step equations

$$3x - 12 = -9$$
$$+12 \quad +12$$
$$\frac{3x}{3} = \frac{+3}{3}$$
$$x = 1$$

Example 6
Two-step equations

$$2x + 5 = -3$$
$$-5 \quad -5$$
$$\frac{2x}{2} = \frac{-8}{2}$$
$$x = -4$$

Summary: