

# Algebraic Expressions

## Translate verbal words/phrases into equations

- ❖ Step 1: Assign a \_\_\_\_\_ to represent the \_\_\_\_\_.
- ❖ Step 2: Identify \_\_\_\_\_ that indicate (points out) \_\_\_\_\_

OPERATION	KEY WORD/PHRASE	EXAMPLE	TRANSLATION
Addition ( + )	plus	A number plus three	$x + 3$
	more than	Ten more than a number	$x + 10$
	the <b>sum</b> of	The sum of a number and five	$x + 5$
	the <b>total</b> of	The total of six and some number	$6 + x$
	increased by	A number increased by two	$x + 2$
	added to	Eleven added to a number	$x + 11$
Subtraction ( - )	minus	A number minus seven	$x - 7$
	less than	Four less than a number	$x - 4$
	the difference of	The difference of a number and three	$x - 3$
	less	Nine less a number	$9 - x$
	decreased by	A number decreased by twelve	$x - 12$
	subtracted from	Six subtracted from a number	$x - 6$
Multiplication ( x )	times	Eight times a number	$8x$
	the <b>product</b> of	The product of fourteen and a number	$14x$
	twice; double	Twice a number; double a number	$2x$
	multiplied by	A number multiplied by negative six	$-6x$
	of	Three fourths of a number	$\frac{3}{4}x$
Division ( ÷ )	the <b>quotient</b> of	The quotient of a number and seven	$\frac{x}{7}$
	divided by	Ten divided by a number	$\frac{10}{x}$
	the ratio of	The ratio of a number to fifteen	$\frac{x}{15}$
Powers ( $x^n$ )	the square of; squared	The square of a number; a number squared	$x^2$
	the cube of; cubed	The cube of a number; a number cubed	$x^3$
Equals ( = )	equals	Seven less than a number <b>equals</b> ten.	$x - 7 = 10$
	is	Three times a number <b>is</b> negative six.	$3x = -6$
	is the same as	Eight <b>is the same as</b> twice a number.	$8 = 2x$
	yields	Twelve added to a number <b>yields</b> five.	$x + 12 = 5$
	amounts to	Nine less a number <b>amounts to</b> twenty.	$9 - x = 20$

## DO NOW!

❖ Translate each verbal phrase into an equation.

- (1) The sum of a number and three gives five. \_\_\_\_\_
- (2) Two multiplied by a number is equal to eight. \_\_\_\_\_
- (3) Difference between a number and twenty three is twelve. \_\_\_\_\_
- (4) Eleven times a number is thirty three. \_\_\_\_\_
- (5) One-half of a number is equal to three. \_\_\_\_\_
- (6) Combine three and five times a number gives eighteen. \_\_\_\_\_
- (7) Subtract three from quarter of a number is 6. \_\_\_\_\_
- (8) Product of two and the difference between a number and one is fourteen. \_\_\_\_\_
- (9) 3 divides the difference between h and 4 represents five. \_\_\_\_\_
- (10) Subtract four from twice of a number is seven times a number. \_\_\_\_\_

❖ Translate each equation into a verbal phrase.

- (1)  $9y = 27$  \_\_\_\_\_
- (2)  $x - 18 = 9$  \_\_\_\_\_
- (3)  $\frac{y}{12} = 3$  \_\_\_\_\_
- (4)  $2c - 5 = 8$  \_\_\_\_\_
- (5)  $7(b + 2) = 14$  \_\_\_\_\_
- (6)  $\frac{a}{2} - 20 = 3$  \_\_\_\_\_