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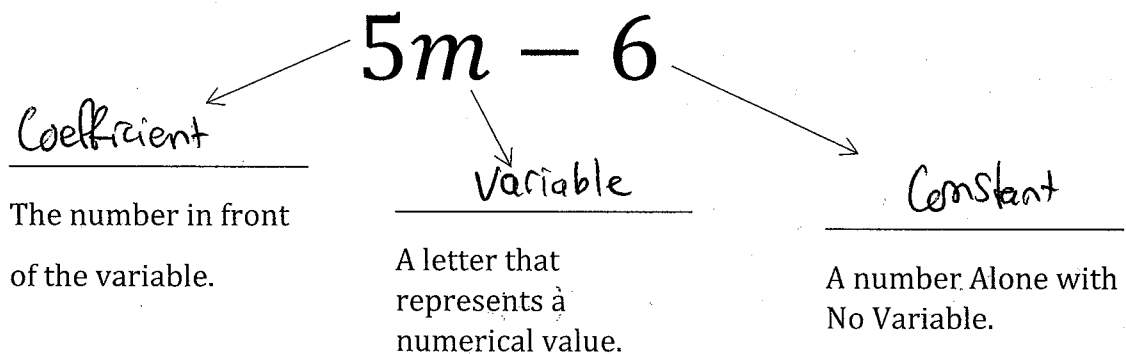
Mr. Tallman

Do Now**Write as many words that mean each operation below as you can think of.**

<u>Addition</u>	<u>Subtraction</u>	<u>Multiplication</u>	<u>Division</u>
Sum more than increased plus	Difference less than minus Subtracted from	Product "of"	Quotient "per"

Lesson #48 - Translating Expressions

An Expression is a mathematical sentence that DOES NOT CONTAIN an equal sign. There are different parts to every expression.

**Identify the parts of the following expressions.**

1) $3x - 5$ Coefficient: <u>3</u> Variable: <u>x</u> Constant: <u>-5</u>	2) $9 + 2x$ Coefficient: <u>2</u> Variable: <u>x</u> Constant: <u>9</u>	3) $-8 - 15x$ Coefficient: <u>-15</u> Variable: <u>x</u> Constant: <u>-8</u>
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Just like you can translate something from English to Spanish, you can translate words into a numerical expression.

<u>Operation</u>	<u>Verbal Expression</u>	<u>Algebraic Expression</u>
+	<ul style="list-style-type: none"> • A number increased by 3 • The sum of a number and 3 • 3 more than a number • A number plus 3 	$x+3$
-	<ul style="list-style-type: none"> • The difference of a number and 5 • A number minus 5 • A number diminished by 5 • A number decreased by 5 • 5 subtracted from a number • 5 less than a number 	$x-5$
X	<ul style="list-style-type: none"> • The product of 2 and a number • A number times 2 • A number multiplied by 2 	$2x$
÷	<ul style="list-style-type: none"> • A number divided by 6 • The quotient of a number and 6 	$n \div 6$ or $\frac{n}{6}$
=	<ul style="list-style-type: none"> • A number increased by 12 is 20 	$x+12=20$

Examples: Translate the following sentences into expressions or equations. Underline key words and use "n" as "the number".

4) five times a number is 30. 5x=30

5) 2 subtracted from x x-2

6) $\frac{1}{4}$ of a number is 8. $\frac{1}{4}n = 8$

7) the difference between twice a number and three is nine. $2n-3=9$

8) The sum of a number and 4 multiplied by $\frac{1}{2}$. $\frac{1}{2}(n+4)$

9) Henry fixes TV's. He charges \$25 for a diagnostic fee plus \$24 per hour. $24n+25$

Now, You Try! Translate the following sentences into an expression or equation. Use "n" as your variable.

10) Eleven less than a number $n-11$

11) the product of a number and six is negative 18. $6n = -18$

12) twice a number plus 12. $2n + 12$

13) five times the sum of a number and four is 17. $5(n+4) = 17$

14) Samantha bought jewelry at a crafts fair. She bought a necklace for \$8 and some bracelets for \$5 each. She spent \$23 in all. Write an equation that can be used to find the number of bracelets Samantha bought.

$5n + 8 = 23$ or $8 + 5n = 23$

15) Five times a number increased by seven $5n + 7$

16) Three times a number x subtracted from 24 $24 - 3x$

Identify the coefficient, variable and constant in each expression below.

17) $-7x + 9$ Coefficient: <u>-7</u> Variable: <u>x</u> Constant: <u>9</u>	18) $12t - 13$ Coefficient: <u>12</u> Variable: <u>t</u> Constant: <u>-13</u>	19) $-18 - 6x$ Coefficient: <u>-6</u> Variable: <u>x</u> Constant: <u>-18</u>
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