Mathematics9 Date _____

Unit 5 Intro To Polynomials

5.2A Substitution & Translating English to Algebra

Substitution – replace variables with given values and then evaluate BEDMAS

Ex. Evaluate each expression for the given variable values:

a) $3x + y$ if $x = -2$ and $y = 4$

$= 3(-2) + (4)$

$= -6 + 4$

$= \boxed{-2}$

b) $-2ab - (a + b)$ if $a = 3$ and $b = -1$

$= -2(3)(-1) - ((3) + (-1))$

$= 6 - 2$

$= \boxed{4}$

c) $\frac{p-q}{2pq}$ if $p = 3$ and $q = -5$

$= \frac{(3) + (+5)}{2(3)(-5)} = \frac{8}{-30}$

$= -\frac{4}{15}$

Translating English to Algebra – see keyword list on back

Ex. Write an algebraic expression for each statement (let x be the number):

a) Five more than double a number. (5 + x2)

$\boxed{5 + 2x \text{ or } 2x + 5}$

b) Three less than five times a number. (3 − 5 x)

variable

~~$3 - 5x$~~

$\boxed{5x - 3}$

c) Three decreased by five times a number. (3 − 5 x)

x

$3 - 5x$

Ex. Tickets for a play cost \$8 for adults and \$3 for children. Write an expression representing the total money collected from ticket sales.

Let a = adult sales

c = child sales

$\boxed{8a + 3c}$

Translating English to Math - Key Words

Addition	increased by more than combined, together total of sum added to and
Subtraction ****order matters****	decreased by minus, less difference between/of less than fewer than reduced by
Multiplication	of (ex. $\frac{2}{3}$ of a number) times multiplied by product of twice, doubled (x2), tripled (x3), etc.
Division	per a out of ratio of quotient of percent (divide by 100)
Equals	is are was were will be gives yields sold for

Practice: WS 5.2A