

## \*Algebraic Expressions:

12/9/19

\*Ex: How can learning to write Algebraic Expressions be used to solve for an unknown in real world problems?

### \*Notes:

- Variable: An unknown # in an equation

\* Variable: A letter used to represent an unknown #

\* Expression:  $C + 10$

\* Sum: The sum of two or more #'s is obtained by ADDING them. Ex:  $4 + 5$ ,  $x + 7$ ,  $1r + 1s +$

\* Difference: The difference between two #'s is the larger one MINUS the smaller one.

Ex:  $8 - 3$ ,  $n - 11$

\* Product: The product of two/more #'s is obtained by multiplying them. Ex:  $5 \times 5$ ,  $4b$ ,  $pqr$

\* Quotient: The quotient of two #'s is the first one mentioned divided by the second. Ex: quotient of  $a$  by  $b$ :  $\frac{a}{b}$

\* Mean: The mean of a set of #'s is their sum DIVIDED by # of #'s.

- Ex. Mean of  $x, y, z$  is  $\frac{x + y + z}{3}$

Learning to write algebraic expressions is important because we often use these basic expressions to solve simple things in life. For example, we use algebraic expressions almost every time we purchase anything at a store.

Questions:

\* Notes:

Identify the parts of an equation

Parts of an Equation

$$17x + 5 - 4 = 3z + 4 = 10$$

\* Variables: x, y, z

\* Operations: multiplication, addition (+), subtraction, division, exponents

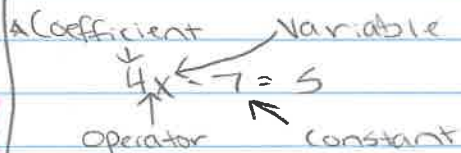
What is the difference between a coefficient and a constant?

\* Coefficient(s): # in front of a variable (Ex: 17x) ◊

\* Constant(s): # w/o a variable (numbers) - something that doesn't change / consistent : Δ

- Can only solve equation w/ one variable

How would you define an algebraic expression?



\* Algebraic Expression: An expression used in mathematics that has constants, variables, + operators (e.g. +, -, x, =) - NO 'equal sign'

How many pence in a pound?

\* Square: To square a # means to multiply it by itself (e.g. Square 4 means  $4^2 = 16$ )

What does CHF stand for?

- England: £ = 100

What does CHF stand for?

- "Confederatio Helvetica Franc" (Swiss Franc) - currency in Switzerland: € - Euro: - Official currency of the Eurozone

1) What does the term "treble" mean?

\* Notes:

\* Treble: Multiply by 3

\* One quarter of:

2) How would you write an equation?

\* Writing Equations:

- A family goes out to dinner. The service was excellent & they want to leave a 17% tip. If the final bill was \$65.00, how much did the family have to pay in total?

$$= \$76.05$$

$$65 \cdot .17 = \$11.05 \text{ tip}$$

$$\$65 + 11.05 = \$76.05$$

$$\$85 \cdot .17 = \$14.45$$

$$\$85 + 14.45 = \$99.45$$

\* Steps:

$$\text{Bill} + \text{Tip} = \text{Total}$$

$$(B + t + T)$$