Writing Expressions

VERBAL EXPRESSION - *an expression written as a word phrase*

Examples:

two plus four   a number increased by two

$2 + 4$ $x + 2$

Verbal expressions can be translated to numerical or algebraic expressions by identifying numerical values, variables, and key terms that signal an operation.

ALGEBRAIC EXPRESSION - **a combination of variables, numbers, and at least one operation.**

Examples:

$5 + n$ $7a$ (means $7 \times a$) $k - 3$

VARIABLE - *a placeholder, a letter or symbol, used to represent an unspecified value in mathematical expressions or equations*

Suppose you knew that the Panthers scored 35 points in the first half of a game, but you didn't know how many points they scored in the second half. You could use a variable to represent the number of points scored in the second half.
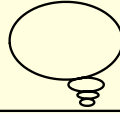
DEFINE THE VARIABLE: **35 + p**

p = points in the second half

Review key words for the different operations

Drag word to correct operation (14 words)

ADDITION	SUBTRACTION
plus	decreased by
sum	less than
increased by	minus
more than	difference

MULTIPLICATION	DIVISION
of	quotient
times multiplied by	divided by
product	

Verbal Phrases	Algebraic Expression
9 more than a number the sum of 9 and a number a number plus 9 a number increased by 9 the total of x and 9	Click to reveal $x + 9$
4 subtracted from a number a number minus 4 4 less than a number a number decreased by 4 the difference of h and 4	$x - 4$ ~~4 - x~~
6 multiplied by g 6 times a number the product of g and 6	
a number divided by 5 the quotient of t and 5 divide a number by 5	

Write a word phrase for each algebraic expression.

Algebraic Expression	Word Phrase
$q + 5$	A number plus 5
$3 - t$	3 decreased by a number
$y / 5$	A number divided by 5
$12 x$	12 times a number

Tips to remember:

• Letters in math are called <u>**variables**</u> because their values <u>**vary**</u>.

• When multiplying a number and a variable, the number is written first. For example: x times 5 is 5x not x5.

• Don't use subtraction in the wrong order!

For example:
"the difference of 5 and t" and "5 decreased by t"
            are translated as **5 - t**
while "5 less than t" and "5 subtracted from t"
            are translated as **t - 5**.

Real World Application:

1. Mary earns an allowance of $5 per week. She also earns $6 per hour babysitting. Write an expression that would represent the total amount of money she earns in one week.

define the constant: _____ 5 _____

define the variable: _____ 6h _____

expression: _____ 6h+5   6(6)+5 = 36+5 = $41

Evaluate your expression to determine how much Mary will make if she works for 6 hours.

Real World Application:

1. You have decided to treat yourself to ice cream. "Scoops" has one cone of ice cream for $3 and each topping is $1.

define the constant: _____ 3 _____

define the variable: _____ 1t _____

expression: _____ 1t+3   1(3)+3   3+3 = $6

Evaluate your expression to determine how much it will cost to get an ice cream cone with 3 <u>toppings</u>.

1-15 only
Bring to Mrs. M'hee
when done
Get spiral from Mrs. M'Gee
and work on it