EXPRESSIONS
ALGEBRAIC and VERBAL

NAME:

ALGEBRAIC EXPRESSIONS ALLOW US TO TRANSLATE WRITTEN INFORMATION OR VERBAL PHRASES WITH A VARIABLE OR UNKNOWN QUANTITY INTO MATHEMATICS. TAKE A LOOK AT THE SENTENCE BELOW.

Gerry is going to buy some shirts that cost $9.00 each.

WE KNOW HOW MUCH THE SHIRTS COST. THIS AMOUNT IS CALLED A ***CONSTANT*** BECAUSE IT CONSTANTLY STAYS THE SAME, BUT HOW MANY SHIRTS IS HE GOING TO BUY? THIS UNKNOWN AMOUNT IS CALLED A ***VARIABLE***, BECAUSE IT CAN VARY OR CHANGE. IN ALGEBRA WE USE SYMBOLS OR LETTERS TO REPRESENT VARIABLES. WE CAN WRITE THIS SENTENCE AS A VERBAL EXPRESSION AND AN ALGEBRAIC EXPRESSION.

Verbal expression → 9 times a number

Algebraic expression → $9s$

9 IS A CONSTANT AND IS THE AMOUNT EACH SHIRT COST. THE "s" REPRESENTS THE NUMBER OF SHIRTS HE BUYS. IT'S A VARIABLE BECAUSE IT CAN CHANGE.

A ***verbal expression*** contains words to explain mathematics.

An ***algebraic expression*** contains one or more variables. It usually contains constants (numbers) and at least one operation.

Below are a few examples of algebraic expressions.

$y - 5$	$4z$	$\frac{t}{8}$
y is the variable and 5 is the constant.	$4z$ means 4 x z.	$\frac{t}{8}$ means t ÷ 8.
5 less than a number	*the product of 4 and a number*	*the quotient of a number and 8*

Write an algebraic expression for each verbal expression.

a. 5 less than 4 times a number ***4b - 5***

1. the sum of 9 and a number
2. a number more than 8
3. the quotient of 2 and a number
4. the difference of a number and 4
5. a number decreased by 11
6. twice the sum of a number and 6
7. the product of 8 and a number
8. 14 less than a number
9. 3 times a number plus 7
10. a number divided by 5
11. one-half of a number

Write a verbal expression for each algebraic expression.

b. $3(2 + t)$ **3 times the sum of 2 and a number**

12. $6y$ _____
13. $\frac{1}{2}(g + 8)$ _____
14. $5 - k$ _____
15. $h + 13$ _____
16. $k - 4$ _____
17. $y \div 9$ _____
18. $7 + d$ _____
19. $\frac{6}{r}$ _____
20. $2b + 4$ _____