

Unit 1 Day 3 Algebraic Expressions Notes

	Example	Mathematical Phrase
Addition	$n + 3$	a number $n$ <u>plus</u> three addition increased add sum*
Subtraction	$n - 3$	a number $n$ <u>minus</u> three Subtract difference* decreased
Multiplication	$3n$ $3 \cdot n$ $(3)(n)$	Three <u>times</u> a number $n$ product* double multiply Triple
Division	$3 \div n$ $\frac{3}{n}$	Three <u>divided by</u> a number $n$ *Quotient half, third, fourth
Fraction	$\frac{3}{n}$	(numerator) divided by (Denominator)
Exponential	$n^3 = n \cdot n \cdot n$	a number <u>to the power of</u> three Cubed Squared
Grouping (Parentheses)	$(n+3)-2$ $5(x+2)$	The sum of a number and 3 decreased by two. Quantity

Five times the sum of a number and two.

Write the following verbal statements as an algebraic expression.

1. A number  $n$  added to 2

$$n + 2$$

2. 4 times a number  $p$

$$4p \quad 4 \cdot p$$

3. (7 <sup>2<sup>nd</sup></sup> more than) (3 <sup>1<sup>st</sup></sup> times a number  $b$ )

$$3 \cdot b + 7$$

$$3b + 7$$

4. 5 less than a number  $x$

$$x - 5$$

5. 3 less than the sum of a number  $t$  and 5

$$(t + 5) - 3$$

6. The quotient of a number  $c$  and -2

$$\frac{c}{-2}$$

Write the following algebraic expressions as a verbal statement.

7.  $3x+5$  three times a number plus five.

8.  $\frac{d}{5} \div 2$  A number d over five divided by two.

9.  $6(r+2)$  Six times the sum of a number and two.

Classroom Expressions:

Variable	Meaning
B	The number of <b>B</b> oys in the classroom
G	The number of <b>G</b> irls in the classroom
P	The number of <b>P</b> encils each student has
L	The cost of a <b>L</b> unch for each student (in dollars)
S	The cost of a <b>S</b> nack for each student (in dollars)
M	The amount of time a student spends in <b>M</b> ath class each day (in minutes)
H	The amount of time a student spends on math <b>H</b> omework each day (in minutes)

What, if anything, does each of the following algebraic expressions represent? (Give the summary phrase, or say "no meaning").

10.  $B + G$

Boys plus Girls = whole class

11.  $GP$

# of pencils ea. girl has.

12.  $BM + BH$

Amount of time boys spend on math.

13.  $LS$

N/A

14.  $G(L + S)$

How money girls spend on food.

15.  $L + S + M + H$

N/A

Write an algebraic expression for each of the phrases below.

16. The total number of pencils for all the students in the class.

$$PB + GP = (B + G)P$$

17. The cost of lunch for all the students in the class

$$(B + G)L = BL + GL$$

18. The total amount of time that all the students in the class spend on Math each day (both in class and on homework)

$$(B + G) \cdot (M + H)$$

19. Make up one other meaningful expressions using the list of variables above, and give its summary phrase.

