

ALGEBRA 1

Name _____

1-1 PRACTICE: VARIABLES and EXPRESSIONS

1. Define each of the following:

Variable _____

Constant _____

Expression _____

Equation _____

2. Write an algebraic expression for each phrase.

a. The product of 9 and a number t .b. The difference of a number x and 5.c. Twice the sum of a number p and 3.d. The quotient of 12 and the product $5m$.e. Four less the product of 8 and y .f. Four less than the product of 8 and y .

3. Write a word phrase for each algebraic expression.

a. $\frac{2y}{5}$

b. $28 + p$

c. $2(5 - n)$

4. While on vacation, you rent a bicycle. You pay \$9 for each hour you use it. It costs \$5 to rent a helmet while you use the bicycle.

Complete the table to represent the given situation.

Number of Hours	Rental Cost
1	$\$9(1) + \5
2	$\$9(\quad) + \5
3	
4	
h	

5. At a shoe store, a salesperson earns a weekly salary of \$150. A salesperson is also paid \$2.00 for each pair of shoes he or she sells during the week.

Complete the table to represent the given situation.

Pairs of Shoes Sold	Total Earned
5	$\$150 + (\$2)(5)$
10	$\$150 + (\$2)(\quad)$
12	
15	
n	

6. You and some friends are going to a museum. Each ticket costs \$4.50.

a. If 5 friends go to the museum, determine the total cost. (Show work!)

b. If m friends go to the museum, write an expression that gives the cost of buying m tickets.

7. **Error Analysis.** A student writes the word phrase “the quotient of n and 5” to describe the expression $\frac{5}{n}$. Correct the student’s error and describe the expression.