

Pre-Algebra

Unit 4 Review - Expressions

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1.) For each expression, identify how many terms the expression has, the constant of the expression, and the coefficient.

Expression:	$2x + 1$	$5x^2 - 2$	$3xy$	$x$	$-x$
# of Terms:					
Constant:					
Coefficient					

2.) Write an expression for each verbal phrase listed below.

a) Twice the sum of a number and 16. \_\_\_\_\_

b) Five less than a number  $m$ . \_\_\_\_\_

c) The quotient of four times  $b$  and six. \_\_\_\_\_

d) 12 subtracted from a number  $x$ . \_\_\_\_\_

e) From 12, subtract  $x$ . \_\_\_\_\_

f) The cost of  $b$  apples if each apple cost \$0.89. \_\_\_\_\_

g) If the cost of candy apples is represented by  $x$  dollars and three friends are splitting the cost evenly, write an expression to represent the amount of money each person owes. \_\_\_\_\_

h) The cost of tickets at the school play are different for adults and students. For adults,  $a$ , each ticket is \$10.00. For children,  $c$ , each ticket is \$7.00. Write an expression that represents the amount of money collected from both adults and children. \_\_\_\_\_

3.) . Simplify each expression completely.

a. $-2.1x + 6y - 6.1x + 4y$	b. $2 - (x + 9)$
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c. $\frac{1}{4}(16m - 20) - 2m + 5$	d. $-2(6x) - 5(3x)$
e. $\frac{2}{3}a - 1 + 6a$	f. $9(x - 5) - (2x - 5)$

For #'s 4 and 5, state the property that justifies each step.

4.  $5(3a + 4) + 2$

$\hookrightarrow 15a + 20 + 2$  \_\_\_\_\_

$15a + (20 + 2)$  \_\_\_\_\_

$15a + 22$

5.  $-3(4x - 2) + 12x$

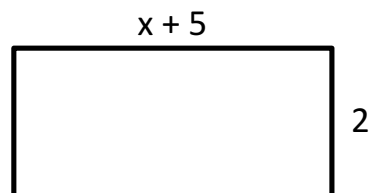
$\hookrightarrow -12x + 6 + 12x$  \_\_\_\_\_

$-12x + 12x + 6$  \_\_\_\_\_

$0 + 6$  \_\_\_\_\_

$6$  \_\_\_\_\_

6. Consider the rectangle pictured to the right. Express the **area** and **perimeter** as an algebraic expression in simplest form.



7. Write a simplified expression when  $4x - 1$  is subtracted from  $2x + 5$ .

8. Are  $7x$  and  $6x^2$  like terms? Explain.