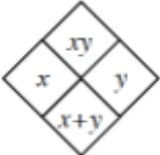
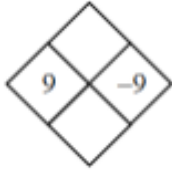
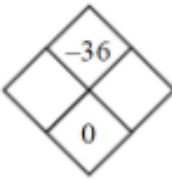
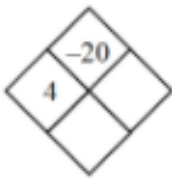
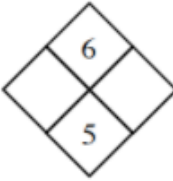
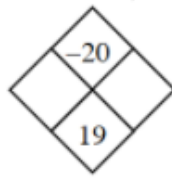


Name \_\_\_\_\_

Period \_\_\_\_\_ Date \_\_\_\_\_

## Homework 4.1.1

1) Complete the following Diamond Problems

<p>Pattern:</p> 	<p>a)</p> 	<p>b)</p> 	<p>c)</p> 	<p>d)</p> 	<p>e)</p> 
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2) Multiply the expressions below using an Area Model. Write as: Product = Sum

a)  $(x + 4)(x - 9)$

b)  $(2x + 1)(3x - 2)$

c)  $(y + x)(y - x)$

3) Write the area of the rectangle to the right as a sum = product.

$-1x$	$-3y$	$5$
$2x^2$	$6xy$	$-10x$

4) Previously, you have used the Distributive Property and common factors to change expressions written as sums into expressions written as products.

For example: The sum  $12x+18$  may be rewritten as the product  $6(2x+3)$  because 6 is a common factor of both terms of the original expression.

Since  $x$  is a common factor of every term in the sum  $x^2 + xy + x$  the expression may be rewritten as the product  $x(x + y + 1)$

Use the greatest common factor to rewrite each sum as a product.

a)  $4x + 8$

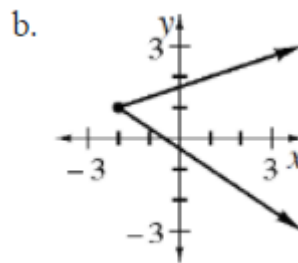
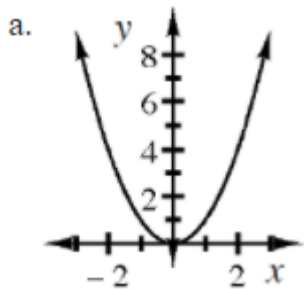
b)  $10x + 25y + 5$

c)  $2x^2 - 8x$

d)  $9x^2y + 12x + 3xy$

## Integrated Math 1 Review

A relationship between inputs and outputs is a **function** if there is one and only one output for each input. Using this definition, decide if the relationships below are functions or not.



c.

$x$	$y$
-8	-4
-1	-3
0	-2
1	-1
8	0

d.

