Honors Alg 2 wks

PRACTICE PROBLEMS: Simplify each expression

1. $x^2 + 2x - 3 + 2x^2 - 7x + 9$
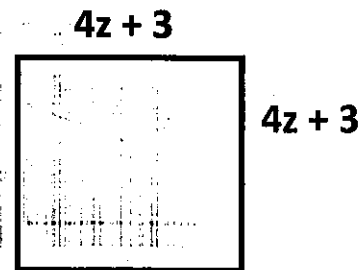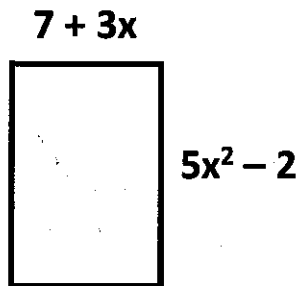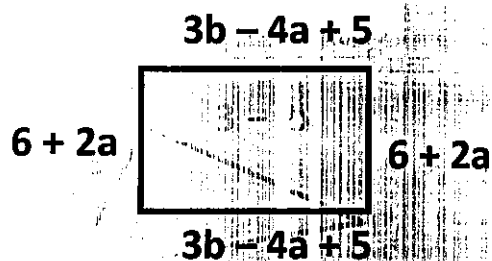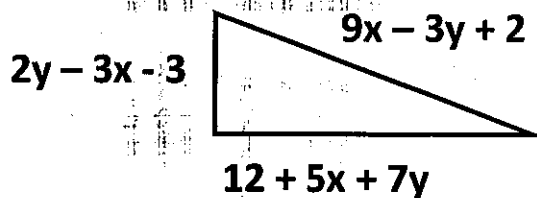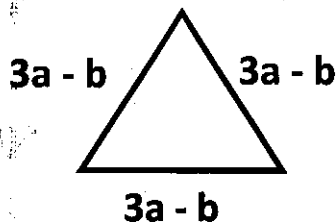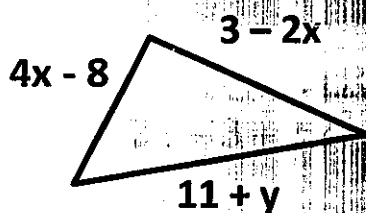
2. $(3x + 5) + (2x - 3)$

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

4. $(2x^2 + 2x - 4) + (x^2 + 3x + 7)$

Find the PERIMETER of the shape.

Equation: Perimeter = Sum of all the sides

3 – 2x

4x - 8

11 + y

3a - b   3a - b

3a - b

9x – 3y + 2

2y – 3x - 3

12 + 5x + 7y

3b – 4a + 5

6 + 2a   6 + 2a

3b – 4a + 5

7 + 3x

5x² – 2

4z + 3

4z + 3

Word Problems:

1) Bob mowed $(2x^2 + 5x - 3)$ yards on Monday, $(4x - 7)$ yards on Tuesday, and $(3x^2 + 10)$ yards on Wednesday.
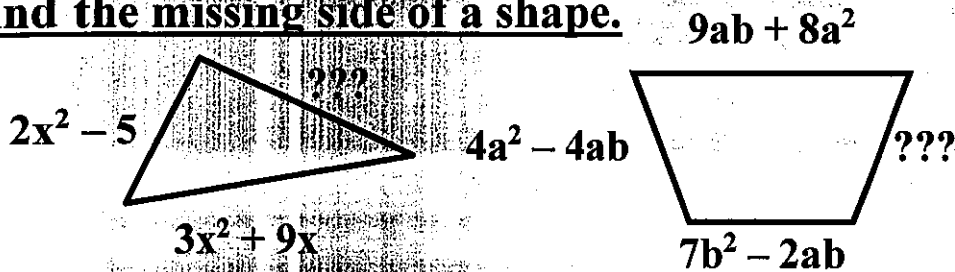
    a. How many yards did he mow in the three days?

    b. If Bob mowed $14x^2 + 12x - 3$ yards total for the entire week, how many yards did he mow during the rest of the week?

2) Molly has $(4x + 10)$ dollars and Ron has $(-5x + 20)$ dollars.
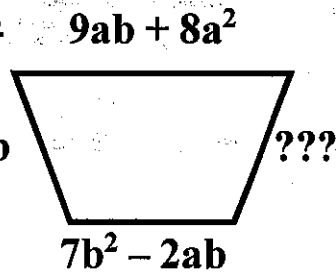
    a. How much money do they have altogether?

    b. How much more money does Molly have than Ron?

3) Ross has $(8x - 5)$ tickets for Chuck E Cheese. He is going to play today and wants to buy a prize that is $(15x + 1)$ tickets. How many tickets must he win to have enough tickets to buy the prize?
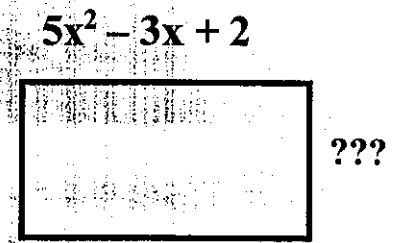
Find the missing side of a shape.

$2x^2 - 5$??? $4a^2 - 4ab$

$3x^2 + 9x$

Perimeter
$5x^2 + 7x + 12$

$9ab + 8a^2$

???

$7b^2 - 2ab$

Perimeter
$9b^2 - 2ab + 12a^2$

$5x^2 - 3x + 2$

???

Perimeter
$14x^2 + 4x - 8$

4) The measure of the perimeter of a triangle is $37s + 42$. It is known that two of the sides of the triangle have measures of $14s + 16$ and $10s + 20$. Find the length of the third side.

5) A triangle has a perimeter of $10a + 3b + 12$ and has sides of length $3a + 8$ and $5a + b$, what is the length of the third side?

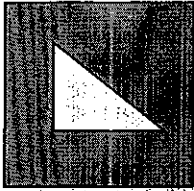6) For a rectangle with length of $3x + 4$ and perimeter of $10x + 18$, what is the width of the rectangle?

7) A rectangle has a perimeter of $12y^2 - 2y + 18$ and has a width of $4y^2 - y + 6$. What is the length of the rectangle?

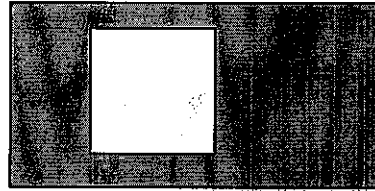# SPECIAL PROBLEMS: Find the area of the shaded region in the simplest form.

(BIG SHAPE) – (LITTLE SHAPE "HOLE") = SHADED REGION

EXAMPLES:

1) A square of side length 8 has a triangle of base 4 and height 3 cut out of it.

2) A rectangle with width of 7 and length of 9 has a square of side length 5 cut out of it.
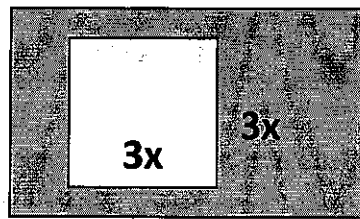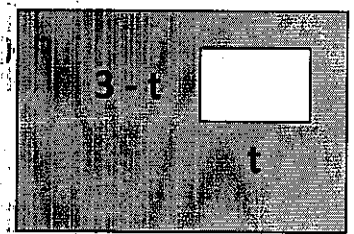
3)

11y

6y

6y

11y

4)

3x

3x

5x - 2

4x

5)

3 - t

8 -2t

t

3t