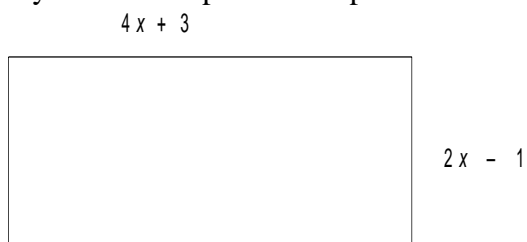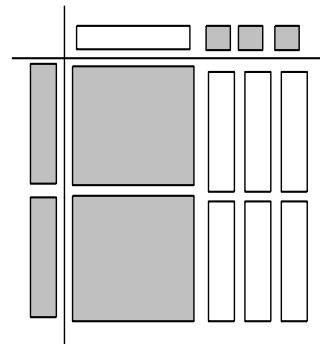# EXAM REVIEW GRADE 9
Unit 5 – Polynomials

Name: _____ Class: _____

1. Simplify: $2x^2 - 2x + 5x^2 - 4x - 3x^2 + 2x$

2. What is the opposite of $4x^2 - 3x + 2$?

3. Write a polynomial with a coefficient of 3, degree 2 and a constant term of 7.

4. If $x = 3$, what is the value of $x^2 - 2x + 3$?

5. Write a polynomial to represent the perimeter of this rectangle.

   4 x + 3

   2 x - 1

6. Which multiplication sentence is modeled by the algebra tiles shown?

7. Perform the operations indicated and simplify:

   a. $(2x^2 - 5xy + 3y^2) + (7xy - 5y^2 + 4x^2)$

   b. $(-4x^2 + 6x - 3) - (2x^2 - x + 5)$

   c. $-3(2x^2 - 4xy + 5y^2)$

   d. $\dfrac{30x^2 - 18xy}{-6x}$

Name: _____ Class: _____

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

8. A student subtracted $(2x^2+5x-3)-(x^2-2x+4)$ like this:

$$(2x^2+5x-3)-(x^2-2x+4)$$
$$= 2x^2+5x-3-x^2-2x+4$$
$$= 2x^2-x^2+5x-2x-3+4$$
$$= x^2+3x+1$$

Identify the errors and correct them.

9. Two sides of a triangle are $3x-4$ and $2x+5$. If the perimeter is $9x+6$, what is the length of the third side of the triangle?

10. A rectangular rug with dimensions $2x$ by $(x+1)$ is placed in a rectangular room with dimensions $(4x)$ by $(3x+4)$. What area of the floor is *left uncovered*?