Name: _____ Period: _____

Math 9: Polynomials Quiz #1

Full credit will only be awarded for all work shown in a neat and organized manner.

1. For the polynomial $z - 3z^2 + 4xy + 7$
   - How many terms are in the polynomial?   _____

   - What are the variables in the polynomial?   _____

   - What are the constants in the polynomial?   _____

   - What are the coefficients in the polynomial?   _____

2. Write a polynomial that has 4 terms when simplified with a constant of -5 and a coefficient of 2

3. **Draw** the polynomial below using algebra tiles. **Simplify** the polynomial **using your drawing**. Write the simplified polynomial **using variables.**

$$x^2 - 3x - 2x^2 - 3 + 3x - 1$$

4. **By drawing algebra tiles**, explain why $3x^2 - x$ does not simplify to $2x^2$

5. Add and subtract the following polynomials and simplify. **(Show your work!)**

a) $(5x - 5) + (3x + 7)$

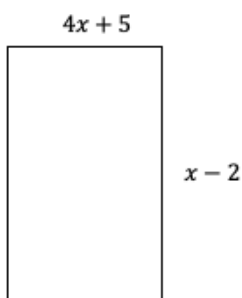b) $(2y^2 - 8y + 4) + (-6y^2 + 2)$

c) $(2x + 8) - (4x - 2)$

d) $(-3t^3 - 4t + 1) - (-6t^2 - 5t + 2)$

e) $(3a + 1) + (4b - 3) - (2a - 5)$

f) $(-5x^2 + 4xy) - (y - 3x^2 - 2xy) - (6x + 7y)$

6. Find the perimeter of the rectangle.

$4x + 5$

$x - 2$

7. The perimeter of the triangle is $7x + 1$. Find the missing side length.

$4x - 3$

?

$2x^2 - 3x + 1$