**Word Problem Project** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Foundations of Math 1 Date: \_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_

**DUE: Tuesday, October 29**

Create an original word problem that involves the use of a geometric figure and polynomials. Your problem should be neat on plain white paper and be colored in (nothing left in pencil). Be sure to make your problem creative and include a picture! Your problem must include the following:

\_\_\_\_\_\_\_ /10: Name and correct materials used (plain paper, colored work, etc)

\_\_\_\_\_\_\_ /10: Uses polynomials for the side lengths (monomials and binomials only)

\_\_\_\_\_\_\_ /10: Incorporates area, perimeter, and the area of a shaded region into the word problem

\_\_\_\_\_\_\_ /10: Correct work is shown, with final solution highlighted or circled

\_\_\_\_\_\_\_ /10: Illustrated, creative, and neat

\_\_\_\_\_\_\_ /50: Total

**Example: (may not be used)**

Silas just bought a new house with a below-ground rectangular pool in the backyard. The length of the pool is (x + 2) and the width is (2x + 1). The length of the yard is (2x + 4) and the width is (3x + 2).

1. How many square feet of the backyard does the pool take up?
2. How much of the backyard is grass that needs to be mowed?
3. If Silas wants to plant flowers all around the pool, what is the distance around the pool?
4. Area pool = (length)(width)

Area pool = (x + 2)(2x + 1)

Area pool = 2x2 + 1x + 4x + 2

Area pool = 2x2 + 5x + 2

1. Area yard = (2x + 4)(3x + 2)

Area yard = 6x2 + 4x + 12x + 8

Area yard = 6x2 + 16x + 8

Area grass = Area yard – Area pool

Area grass = (6x2 + 16x + 8) – (2x2 + 5x + 2)

Area grass = 6x2 + 16x + 8 – 2x2 – 5x – 2

Area grass = 4x2 + 11x + 6

1. Distance = Perimeter = 2(length) + 2(width)

P = 2(x + 2) + 2(2x + 1)

P = 2x + 2 + 4x + 2

P = 6x + 4