Unit 2: Exponents and Polynomials Assignment #2

1. Write a polynomial to match the following conditions.

3 terms, degree 2, with the coefficient on the 2nd degree term –2

2. Identify the equivalent polynomials. Justify your responses.

**a)** –5*y*2 – 3*y* – 4 **b)** 10*x* – 1

**c)** 1 + *x* – *x*2 **d)** 2*y*2 **–** 4 – 16 **–** 7*y*2 – 3*y* + 16

**e)** –7 + 5*x* – 7*x* – 8 + 14 + 12*x* **f)** 5*x*2 + 7+ 4*x* – 6*x*2 – 6 – *x* – 2*x*

a with \_\_\_\_ c with \_\_\_\_ e with \_\_\_\_

3. For each shape below, write an expression for perimeter using polynomials and then simplify the expression.

 **i)** **ii)**

Expression Expression

Perimeter Perimeter

4. Subtract.

**a)** (*xy* – *x* – 5*y* + 4*y*2) – (6*y*2 + 9*y* – *xy*) **b)** (2*a* + 3*b* – 3*a*2 + *b*2) – (–*a*2 + 8*b*2 + 3*a* – *b*)

5. Determine each product.

**a)** 4(3*a* + 2) **b)** 2(4*c*2 – 2*c* + 3)

**5.** Determine each quotient.

**a)** (16*v* + 16) ÷ (8) **b)** (20 – 8*n*) ÷ (–4)

6. Write the multiplication sentence modelled by each set of algebra tiles.

Eg (\_\_\_\_\_) x (\_\_\_\_\_) = \_\_\_\_\_\_\_

**a)** **b)**

7. Multiply.

**a)** *v*(3*v* + 1) **b)** 3*c*(5*c* + 2) **c)** (7*k* – 3)(–*m*)

**8.** Divide.

**a)** (6*x* + 3) ÷ 3 **b)** (12*c*2 – 6*c*) ÷ 3*c* **c)** (9*xy* – 6*x*) ÷ (–3*x***)**

 *9***.** Here is a student’s solution for a division question.

(–12*x*2 – 9*x* – 12*xy*) ÷ (–3*x*)

= 

= 4*x*2 – 3 + 4*xy*

**a)** Explain why the student’s solution is incorrect.

**b)** What is the correct answer?

10. Write an area expression, using polynomials for each rectangle. Simplify the expression.

 **a)** **b)**

Expression Expression

Area Area