Name: _____

Math 90 Polynomial Quiz #2

1. List the number of terms in each polynomial.

   a) $4x^3 - 3x^2 + 2x - 1$ b) $6xy - \frac{3}{7}xyz + x$

   (2)

2. Classify each expression.

   a) $4x^5 - x - 6$ b) $-7abc$

   (2)

3. State the coefficient of the polynomial.

   a) $\frac{2}{3}x^4 - 7$ b) $5 - 23y^3$

   (2)

4. State the degree of the polynomial.

   a) $6x^3y - 10xy + 5$ b) x^5y^3z

   (2)

5. State the constant of the polynomial.

   a) $7x^3 + x^2 - 2x + 13$ b) $-9x^4y^2 + 35x^3y^7 - 26$

   (2)

6. State the leading coefficient of the polynomial.

   a) $5x - 7x^2y^3$ b) $x^3y^6 + 8x^2y^4 - 9$

   (2)

7. Create a polynomial that satisfies the conditions listed below.

   a) a binomial with a negative leading coefficient and a degree of six

   b) a trinomial with degree of four and three variables and a fractional constant

   (3)

   c) a monomial with a negative coefficient

8. Model the operations with Algebra Tiles. Show how the polynomials are simplified.

 = positive (+)  = negative(–)

a) $(2x^2 + x - 3) + (x^2 - 3x - 2)$ b) $(4x + y - 1) - (x - 2y - 3)$

(4)

9. Simplify the polynomials by adding or subtracting.

a) $(x^3 + 4x^2 - 20x + 3) + (5x^3 - x^2 - x - 9)$

b) $(y^3 - 4y + 6) + (2y^3 + 3y^2 - 11)$

(5)

c) $(6x^3 - 4x^2 + 2x - 1) - (2x^3 + x^2 - 3x - 5)$

d) $(y^3 - 2y + 5) - (3y^3 + 2y^2 - 8)$

e) $(x - y) + (2x - y) - (4x - y)$