

# Polynomials

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Define the following words:

Monomial:

Binomial

Trinomial

Polynomial

Tell whether each expression below is a polynomial. Explain your answer of yes or no.

1.  $2x^2 + 8$

2.  $\sqrt{x} - 2$

3.  $7x - 1 + x^3$

4.  $\frac{1}{x}$

Simplify the following expressions. Then, classify them as a monomial, binomial, trinomial, polynomial or none.

5.  $-(5x - 8 - x + 2 - xy) + (-6x - 10 + x)$

6.  $-(3x^2 - y^2 - 5x + 3 + 4y^2 - 3xy - 9)$

7.  $-3(4x - 9 - 6x) + (4x - 8 - 7x)$

8.  $-5(2x - 9) - 4(2x - 10 - x + 3)$

Evaluate the following expressions.

9.  $4x^2 - 9 - 7x^2 + 3 - 2xy + 2 + 4xy$        $x = 3$  and  $y = -4$