

Date: \_\_\_\_\_

### 2.3: Subtracting Polynomials

Recall when we subtract integers, we add the opposite integer:

$$5 - (-3)$$

$$= 5 + 3$$

$$= 8$$

1. State the opposite. A term plus its opposite equals 0.

a) 5

$$-5$$

b)  $3x$

$$-3x$$

c)  $x^2 - 3x + 2$

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

d)  $-3y^2 + 4y - 1$

$$3y^2 - 4y + 1$$

Subtract Polynomials: to subtract a polynomial, we add the opposite polynomial.

2. a)  $(3t - 4) - (7t + 8)$

$$= (3t - 4) + (-7t - 8)$$

$$= 3t - 7t - 4 - 8$$

$$= -4t - 12$$

b)  $(-6x - 5) - (-5x + 3)$

$$= -6x + 5x - 5 - 3$$

$$= -x - 8$$

c) subtract  $3m - 6$  from  $4m^2 + 6m - 2$

$$(4m^2 + 6m - 2) - (3m - 6)$$

$$= 4m^2 + 6m - 3m - 2 + 6$$

$$= 4m^2 + 3m + 4$$