

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

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

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

# Operations of Polynomials

**Standard Form:** \_\_\_\_\_

Circle the expression below that is in standard form.

$$x - 4x^2 + 5x^3 + 3 \qquad 5x^3 - 4x^2 + x + 3$$

Arrange each polynomial in **standard form**, then state the **degree** and number of **terms**.

1.  $2x + x^3 - 4 + 5x^2$                       2.  $7 - 6x^2 + x^3 - x$

degree:  
terms:

degree:  
terms:

**Addition:** \_\_\_\_\_

Add the polynomials, make sure they are in standard form, then state the **degree** and number of **terms**

1.  $(5x + x^4) + (3x^4 + 4x)$                       2.  $(4m^4 - m^2) + (5m^2 + m^4)$

degree:  
terms:

degree:  
terms:

**Polynomial:** \_\_\_\_\_

**Subtraction:** \_\_\_\_\_

**Distribute the negative**

$$(6x + 2x^4) - (2x^4 + 3x) \rightarrow$$

Subtract the polynomials, make sure they are in standard form, then state the **degree** and number of **terms**

1.  $(6x + 2x^4) - (2x^4 + 3x)$                       2.  $(7x^2 + 2x) - (3x^2 - x)$

degree:  
terms:

degree:  
terms:

**Multiplication:** \_\_\_\_\_

**Foil Method:**

$$(2x + 3)(x - 2)$$

**Box Method:**

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

Multiply the polynomials using any method, make sure they are in standard form, then state the **degree** and number of **terms**

1.  $(5v - 1)(4v + 3)$

2.  $(3x + 5)(3x - 3)$

degree:  
terms:

degree:  
terms: