

**Factoring Polynomials Day #1 HW**

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

2 terms (GCF, Difference of 2 Squares, Sum/Difference of 2 Cubes) Date: \_\_\_\_\_

**GCF**

Solve.

1.  $x^3 - 5x^2 = 0$

2.  $9x^2 - 18x = 0$

3.  $3x^3 - 15x^2 = 0$

4.  $8x^3 - 12x^2 = 0$

**Difference of 2 Squares**

Solve.

5.  $x^4 - 1 = 0$

6.  $x^4 - 256 = 0$

7.  $x^4 - 625 = 0$

8.  $2x^4 - 8 = 0$  (hint: factor out GCF first!)

## Sum & Difference of 2 Cubes

Formulas:  $a^3 + b^3 =$

$$a^3 - b^3 =$$

Factor.

9.  $x^3 + 1$

10.  $x^3 - 216$

Solve.

11.  $x^3 + 64 = 0$

12.  $x^3 - 343 = 0$