Algebra 2 Lesson: <mark>April 6th</mark>

Learning Target: Students will factor expressions involving a GCF (monomial) and difference of squares.

Let's Get Started:

Watch Video - Factoring Difference of Squares

Practice:

- Get out a sheet of paper, review and take notes over the problems on this video: <u>Factor Common</u> <u>Monomial and Difference of Squares</u>
- 2. When factoring, always ask yourself if there is a common factor. If so, factor that out first.
- **3.** If your remaining polynomial has a term with an exponent greater than one, see if you can factor it like a regular quadratic. If your remaining polynomial leaves you with the difference (subtraction) of two square terms, follow this form for factoring:

Difference of Squares

 $a^2 - b^2 = (a+b)(a-b)$

Factoring Polynomials Practice:

On the same sheet of paper, factor the following practice problems.

Common Monomials and Difference of Squares

1.
$$2xz^4 - 162x$$
 2. $81x^7 - 256x^3$

3.
$$x^7 - \frac{4}{9}x^5$$
 4. $y^6 - \frac{4}{25}y^4$

5.
$$\frac{64}{121}x^6 - 1$$
 6. $4x^6 - 64x^2$

7.
$$\frac{1}{9}x^4 - \frac{25}{36}$$

Answer Key:

Once you have completed the problems, check your answers here. Key

1. $2x(z-3)(z+3)(z^2+9)$ 2. $x^{3}(3x-4)(3x+4)(9x^{2}+16)$

3. $x^{5}\left(x-\frac{2}{2}\right)\left(x+\frac{2}{2}\right)$

5. $\left(\frac{8}{11}x^3 - 1\right)\left(\frac{8}{11}x^3 + 1\right)$

- 4. $y^4 \left(y \frac{2}{5}\right) \left(y + \frac{2}{5}\right)$

6. $4x^2(x-2)(x+2)(x^2+4)$

7. $\left(\frac{1}{2}x^2 - \frac{5}{6}\right)\left(\frac{1}{2}x^2 + \frac{5}{6}\right)$

Additional Practice:

Click on the links below to get additional practice and to check your understanding!

Factor out a Monomial Online Practice

Factoring Difference of Squares Online Practice

Factoring Special Cases Practice

Factoring Special Cases Practice Answer Key