

Greetings and welcome to the Precalculus Honors course for the coming year!

I am looking forward to this journey with you! We will work together to have a great year. The students that take this class will say basically in full unison that this class helped them to do so much better on the SAT and ACT. In the longer range, it prepares you for all future math endeavors in education and in life.

In Precalculus we develop Algebra skills beyond individual procedures that are familiar to a well-practiced toolkit that we can draw from and use whenever needed to simplify and solve whatever math problem we are working with. The course also provides thorough training in trigonometry skills. Other important topics are also included.

For those that would like to take the Precalculus CLEP test at the end of the year, we will direct you in the additional enrichment preparatory work needed. That will begin toward the end of first semester.

You will find attached some algebra factoring review and practice as a Summer warm-up. Factoring is one of the basic algebra procedures we have found needs immediate review and skill development at the beginning of this course because of its common use throughout the course. Provided is a link to a video going over the factoring guide as well as providing additional practice beyond the guide. There will be a quiz over these factoring procedures on the 3rd day of class. Be sure to go over this before school begins so that you can ask for any help you need on it the first 2 days of class.

Factoring review, practice, and quiz:

- Factoring guide document attached
- Video for the factoring guide: <https://vimeo.com/727816652>
- Continue to watch video past the Factoring Guide to the end – there are about 12 additional practice problems on it that you need to work out on paper.
- Bring to class on the first day:
 - Completed Factoring Guide
 - Additional worked out practice problems
- Quiz on Friday, Aug 12, over this material.

Factoring Polynomials Guide

Name _____

1. GCF (greatest common factor) first

a) $4x^2 + 8x - 12xy$

b) $27x^3 - 18x^2 + 3xt$

2. Two Terms: difference of squares or sum/difference cubes

Squares:

a) $x^2 - 9$

b) $16x^2 - 49$

c) $27x^2 - 12$

Cubes:

d) $a^3 + b^3$

e) $a^3 - b^3$

f) $x^3 + 27$

g) $8x^3 - 125y^3$

3. Three Terms: Unfoiling

a) $x^2 + 7x + 12$

b) $x^2 - 5x + 6$

c) $x^2 + 5x - 14$

d) $x^2 - 3x - 18$

Look for perfect squares (T&E)

e) $36x^2 + 60x + 25$

f) $9x^2 - 24x + 16$

Expanded Unfoiling (or T&E)

g) $6x^2 + x - 12$

h) $12x^2 - 7x - 10$

4. Four or more Terms: Grouping

a) $6x^2 + 15x - 14x - 35$

b) $6x^2 + 8x - 15x - 20$