

Summer Work for Precalculus Students

We hope you are having a fun and relaxing summer and are looking forward to having you in pre-calculus in the fall. We are expanding the curriculum of Math 45/46 to include more material tied to the Seven Essential Skills, to adequately prepare you for future courses, collegiate mathematics, and to make many real world applications to the content presented.

In order to fulfill our goals for this course, we will be spending less time reviewing the material learned in Algebra 1 and Trigonometry. The purpose of this required summer work is to review material learned in algebra 1. This work will be collected on the second day of class. All problems must be written out and then completed with organized, neat solutions. You can get help on these by using the review chapter in your text (pages 918-950.). There are many easy to follow examples in this section.

Another resource would be your notes from Algebra 1, for those of you who took Algebra 1 at The Governor's Academy. You can also look at the topics under the "Algebra Review for Geometry Students" on the Elm Street Moodle Site. (Put this link into your browser:

<http://elmstreet.govsacademy.org/moodle/course/view.php?id=793>)

Collaborative work is encouraged, but make sure you know the difference between collaborating and copying. I will be available in the Learning Center on Sunday, September 13 and Monday, September 14 from 6-7:30 if you return to school with a few problems left that you found difficult.

You will be tested on this review material on the third day of class. Remember this is going to be a great math year, actually a great year all around. Come back to school with this packet done to the best of your ability. And enjoy the rest of your summer.

Mrs. Paszko

1. Review of polynomials—Simplify the following expressions. Remember to copy down all problems on another sheet of paper and keep work organized.

a. $(-2n^3 - 3n^2 + 4n) - (5 - 2n^3 + 7n^2)$

b. $(-3y^2 - 4)(2y^2 + 5)$

c. $y(4x + 3y)(4x - 3y)$

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

e. $(2x - 5)^3$

2. Review of Factoring. Factor the following completely. Remember to look up anything you may have forgotten. Hint—always look for GCF first.

a. $9x^2-4y^2$

b. $6a^2 -5a-6$

c. $4x^2y^2+12xy -7$

d. $8x^3+1$

e. $6st +9t -10s -15$

f. $X^4 -2x^2 -48$

g. $3y^3-81$

3. Review of Rational Expressions. Remember that rational expressions must be factored before any common factor can be divided out

a. $(X^2-36) / (x^2 -10x+24) \div \frac{(x^2-9x+18)}{(4x^2)} -9)$

b. $\frac{3x}{2-x} - \frac{3-2x}{x}$

c. $\frac{3}{x^2} - \frac{2-3x}{2xy}$

d. $\frac{\frac{x}{x-y}}{\frac{y}{x+y}}$

4. Review of Rational Exponents. Must show work but could check answers on calculator. Remember that your text is a good place to start—pg.937

a. $8^{-2/3}$

b. $\sqrt[3]{x} * \sqrt{x} * \sqrt[4]{x}$ leave answer in simplified exponential form

c. $\frac{-3x}{\sqrt{x}}$

d. $\frac{-3x}{3+\sqrt{x}}$

e.

$\frac{-3x}{\sqrt[3]{9x}}$

f. $-2\sqrt{18} + \sqrt{8} + 3\sqrt[3]{27}$

