**Precalculus/Trigonometry**

This course is intended for students who will be taking Precalculus/Trigonometry during the upcoming school year, or who have already taken Precalculus/Trigonometry and are looking for review and reinforcement. **This course assumes an understanding of all Algebra II topics**. Please take the Precalculus/Trigonometry placement test before registering. A score of 70% or higher is recommended to enroll in this course.

**Course Topics**: Functions (Power, Polynomial, Rational, Exponential, Logarithmic and Trigonometric), Trigonometric Identities and Equations, Systems of Equations and Matrices, Conic Sections and Parametric Equations, Vectors, Polar Coordinates and Complex Numbers, Sequences and Series, Limits and Derivatives, Statistics

**Precalculus/Trigonometry Placement Test**

Complete the following questions without the use of a calculator.

1. Identify the vertex and y-intercept of .
2. Simplify the expression .
3. Write the expression (x + 6)(x – 4) as a polynomial in standard form.
4. Divide the polynomials: .
5. Find the root: ![<math xmlns="http://www.w3.org/1998/Math/MathML" display="block" data-is-equatio="1" data-latex="\sqrt[3]{-\frac{125}{343}}"><mroot><mrow><mo>−</mo><mfrac><mn>125</mn><mn>343</mn></mfrac></mrow><mn>3</mn></mroot></math>]().
6. Write the equation in logarithmic form: .
7. Simplify 
8. Add .
9. Solve .
10. Solve the system of equations:



1. Write in radical form: 
2. Solve for x: 
3. Solve for x: 
4. Simplify 
5. Find an equation for the line that contains the point (−2, 3) and has slope .
6. Solve .
7. 
8. Divide 

For Questions 19 and 20, the two triangles drawn below are similar.



1. Find the length of side x.
2. Find the length of side y.

Answer Key

1. Vertex (-2,5) y-intercept -7 2.) 14+8i 3.)  4.)  5.)  6.)  7.)  8.)  9.) -8, 1 10.) (0,-5) 11.) ![<math xmlns="http://www.w3.org/1998/Math/MathML" display="block" data-is-equatio="1" data-latex="3\sqrt[8]{x^3}"><mn>3</mn><mroot><msup><mi>x</mi><mn>3</mn></msup><mn>8</mn></mroot></math>]()12.) x=8 13.) x=-20 14.) 15.) 16.)  17.)  18.)  19.)  20.) 

Scoring Guidelines

 70% or higher (14 or more correct): Precalculus/Trigonometry recommended

 Under 70% (0-13 correct): Algebra II recommended