

Stuff you should already know for this class!

Everything from your previous mathematics classes!

- Exponent rules
- Factoring and solving quadratic functions
- Multiplying and factoring polynomials and rational functions
- The quadratic formula (If it helps, 'google' it and you can find it sung to *row, row, row your boat* or *pop goes the weasel*)

Basic Geometry Things You Should Know

1. Perimeter - Triangle, Circle, Rectangle, Square
2. Area - Circle, Triangle, Rectangle, Square
3. Volume - Sphere, rectangular prism (i.e. a box)
4. Other Things - Similar Triangles, Pythagorean Theorem

Trigonometry, especially the following

1. Basic definitions (including domain and range) of sin, cos, tan, sec, csc, cot
2. Basic definitions (including domain and range) of arcsin, arccos, arctan and the rest
3. The Pythagorean Identities including $\sin^2 \theta + \cos^2 \theta = 1$
4. The values of all of the Trigonometric functions at all of the reference angles
5. The double angle formulas for sin, cos, tan
6. The half angle formulas for sin, cos
7. The addition and subtraction formulas for sin, cos, tan

ALL of Calculus I, including but not limited to the following

8. Limits
9. Derivatives (conceptually, computationally, symbolically)
10. Extrema, direction and shape of curves (1st and 2nd derivative stuff, critical and inflection points)
11. Basic antiderivative rules
12. Fundamental Theorem of Calculus