**Pre Calculus**

**Chapter 12 Conic Sections and Quadric Surfaces**

1. Ellipse and Circle (understand how to graph, know where foci are, and eccentricity)

**Learner Outcome:** Given the equation of a conic section sketch it’s graph and vice versa

Homework: worksheet on Graphing Ellipse and Circle

1. Writing Equations of Ellipse and Circle in both standard form and parametric

 **Learner Outcome:** Given the equation of a conic section sketch it’s graph and vice versa

Homework: worksheet Writing equations of Ellipse and Circle

1. Hyperbolas (definition, graphing, foci and eccentricity)

 **Learner Outcome:** Given the equation of a conic section sketch it’s graph and vice versa

Homework: worksheet on Graphing Hyperbolas

1. Writing Equations of Hyperbolas in both standard form and parametric

**Learner Outcome:** Given the equation of a conic section sketch it’s graph and vice versa

Homework: worksheet Writing Equations of Hyperbolas

1. Parabolas (definition, graphing, foci/directrix and eccentricity)

 **Learner Outcome:** Given the equation of a conic section sketch it’s graph and vice versa

Homework: worksheet on Graphing Parabolas

1. Writing Equations of Parabolas in both standard form and parametric

 **Learner Outcome:** Given the equation of a conic section sketch it’s graph and vice versa

Homework: worksheet Writing Equations of Parabolas

1. Review worksheet for Quiz

 **Learner Outcome:** Understand how to graph and write equations of conics

1. Quiz on Conics (Ellipse, Circle, Hyperbola, Parabola)
2. Comparing and Transforming Equations from General form to standard form by completing the square

**Learner Outcome:** Be able to write an equation in both general form and standard form and to identify what type of conic the equation is without seeing a picture

Homework: worksheet Classifying Conic Sections

1. Comparing and Transforming Equations continued

**Learner Outcome:** Be able to write an equation in both general form and standard form and to identify what type of conic the equation is without seeing a picture

1. Quadric Surfaces

 **Learner Outcome:** Given the equation of a conic section, find area or volume of a figure inscribed either in a plane region bounded by the graph or in the solid region bounded by the surface.

Homework: worksheet on Quadric Surfaces

1. Quadric Surfaces

 **Learner Outcome:** Given the equation of a conic section, find area or volume of a figure inscribed either in a plane region bounded by the graph or in the solid region bounded by the surface.

 Homework: worksheet on Quadric Surfaces

1. Review worksheets on Conics and Quadric Surfaces
2. Review continued
3. Chapter 12 Test