

The following is a list of objectives that will be covered on the assessment for this area of study (Quadratic Functions).

There will be no quiz during the study of this topic. The exam will take place over the course of two days. The first day will consist of 18 questions ranging from solving equations to short answer questions. The second part of the exam will consist of four quadratic functions you must graph worth 25 points each.

Objectives

By the time the student is finished with this area of study, he/she should be able to...

- Solve quadratic equations by completing the square.
- Derive the quadratic formula.
- Solve quadratic equations by using the quadratic formula.
- Determine the nature of the roots of a quadratic using the discriminant.
- Put a quadratic function in standard form.
- Determine how the values of a, h, and k affect the graph of a function in $y = a(x - h)^2 + k$ form.
- Find the vertex of a quadratic function.
- Find the x and y intercepts of a quadratic function.
- Find the range and domain of a quadratic function without graphing it.
- Graph a quadratic function.
- Determine the maximum or minimum value of a quadratic function.
- Determine the interval in which the value of a function is increasing, decreasing or constant.
- Determine the interval in which the value of a function is positive or negative.
- Find the equation of a parabola given the vertex and a point on the parabola.
- Find the equation of a parabola given the x intercepts of the graph of the function.
- Find the equation of a parabola given three points on the curve.