**STATION #1:**

GRAPHING QUADRATIC FUNCTIONS

***Directions:*** *Graph each of the following. Then, identify the axis of symmetry, the vertex, the domain and range, and the intervals increasing/decreasing.*

1. Write the equation of the parabola in vertex form if the vertex is (-2, 7) and it contains the point (3, -4).
2. What is the equation of the parabola with a vertex at the origin and a focus at (-3, 0)?
3. What is the equation of the parabola with a vertex at the origin and a focus at (0, 7)?

**STATION #2:**

STANDARD FORM

***Directions:*** *Identify the vertex, axis of symmetry, min or max, and domain and range of the following functions.*

1. Find the vertex and y-intercept:
2. What is the x value of the vertex in the equation?
3. What is the axis of symmetry in the equation?

**STATION #3:**

MODELING WITH QUADRATIC FUNCTIONS

***Directions:*** *Find the equation in standard form of the parabola passing through the points.*

1. (1,-2) (2,-2) (3,-4)
2. (2,9) (-4,5) (1,0)
3. A parabola contains the points (0,-4) (2,4) and (4,4). Find the vertex of this parabola.
4. Put the parabola from #3 into vertex form.
5. List out the domain and range of the parabola in #3.

**STATION #4:**

SOLVING QUADRATIC EQUATIONS

***Directions:*** *Solve the following quadratic equations by factoring.*

***Directions:*** *Solve each quadratic inequality. Remember to sketch a graph and write your solution in interval notation.*

1.

**STATION #5:**

COMPLETING THE SQUARE

***Directions:*** *Solve each quadratic equation by completing the square.*

1. Put into vertex form, by completing the square.
2. What values of *k* would make this a perfect square trinomial?

**STATION #6:**

THE QUADRATIC FORMULA

***Directions:*** *Solve each equation using the Quadratic Formula.*

***Directions:***Evaluate the discriminant for each equation and determine the number and types of roots.

**STATION #7:**

A REVIEW OF COMPLEX NUMBERS

***Directions:*** *Simplify each expression.*

1. Find all the solutions to