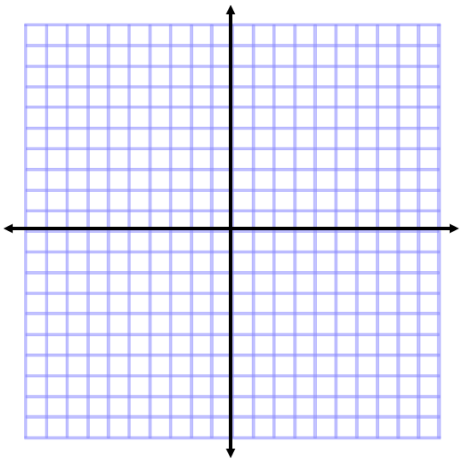
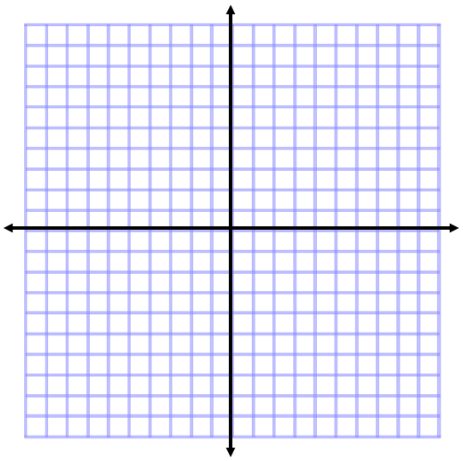
Algebra 2 Honors NAME: _____

Quadratic Test Review

1. Use the equation $y = -5(x-4)^2 + 2$ to answer the questions below:
   a. List the transformations
   b. State the Vertex
   c. State the axis of symmetry
   d. Graph.
   e. State the Domain
   f. State the Range



2. Use the equation $y = x^2 - 2x - 3$ to answer the questions below:
   a. State the Vertex
   b. State the axis of symmetry
   c. Graph.
   d. State the Domain
   e. State the Range



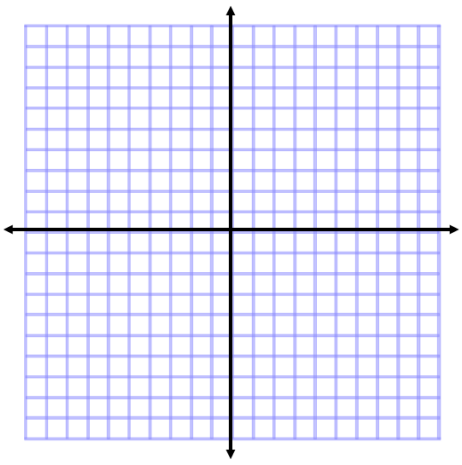
3. What is the equation of the function $y = x^2 + 24x + 29$ in vertex form?

4. Write $y = 2(x-4)^2 - 1$ in standard form.

5. Graph the following inequalities on this graph: ---------->

   $y + x \leq 2$

   $y - x \leq 2$



6. Write the equation of a line in slope-intercept form passing through the point (-2, -5) and is parallel to $2x - 4y = 1$

7. Solve the following equations using elimination:

$$-5x - 8y = -65$$
$$x - 8y = -35$$

8. Solve the following equation using substitution:

$$y = x + 3$$
$$2x + 4y = 24$$

9. A model for stock performance is $P = -3d^2 + 50d$ where d is the number of days of trading and P is the price per share of the stock.

a. After how many days will the price be at its maximum?

b. What is the maximum price per share of the stock?

10. A gardener is putting a wire fence along the edge of his garden.

a. If he has 40 meters of fence available, how far out should he project his fence?

b. What is the maximized area of the fence?

c. what is the length of the fence?

11. The height of an arrow after t seconds is given by $h(t) = 64t - 16t^2$ where h(t) is in feet.

a) What is the maximum height and when is it reached?

b) When does the arrow hit the ground?

c) When is the arrow at a height of 20 feet?