Honors Algebra 2 Name_____

Review T7A (do all of the work on notebook paper so you can turn it in)

Solve by finding square roots.

1) $n^2 + 16n + 64 = -17$
Hint: look for perfect square trinomials.

2) $4(x-1)^2 = 25$

Solve the equation by completing the square.

3) $r^2 - 15r + 51 = -3$

4) $m^2 - 4m - 92 = -6$

5) $2x^2 - 4x + 54 = -10$

Write the function in vertex form. Then identify the vertex.

6) $y = x^2 + 18x + 72$

Find the discriminant of each quadratic equation then state the number and type of solutions.

7) $-x^2 + 3x - 3 = 0$

8) $-5x^2 - 10x - 5 = 0$

9) $6x^2 - x + 3 = 0$

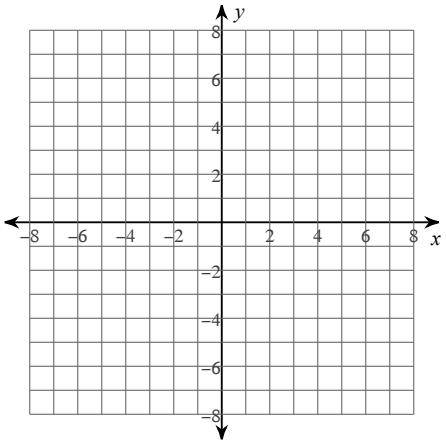
Solve the equation by using the quadratic formula.

10) $9x^2 + 9 - 12x = -20x$

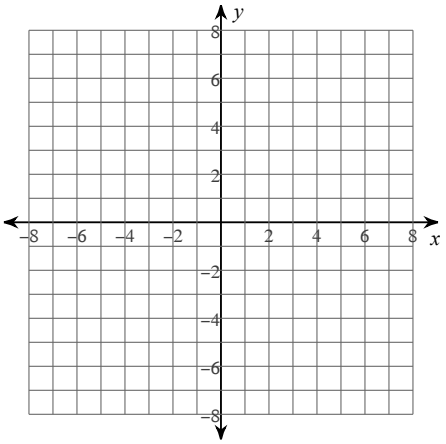
11) $x^2 - 81 = 0$

Sketch the graph of each function. Label all of the points on the graph. Label the axis of symmetry on the graph. Tell where the function is increasing and decreasing. Tell if the function is concave up or concave down. Identify the relative minimum or relative maximum.

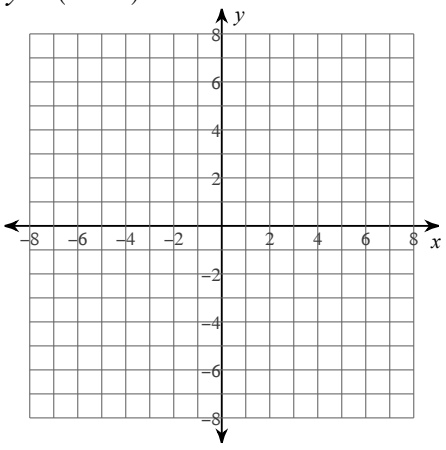
12) $y = \frac{1}{3}(x-2)(x+4)$



13) $y = -\frac{1}{2}x^2 + 4x - 10$



14) $y = (x+2)^2 + 2$



15) You can use the graphs provided for your graph, but put all of the work and other answers on your notebook paper.