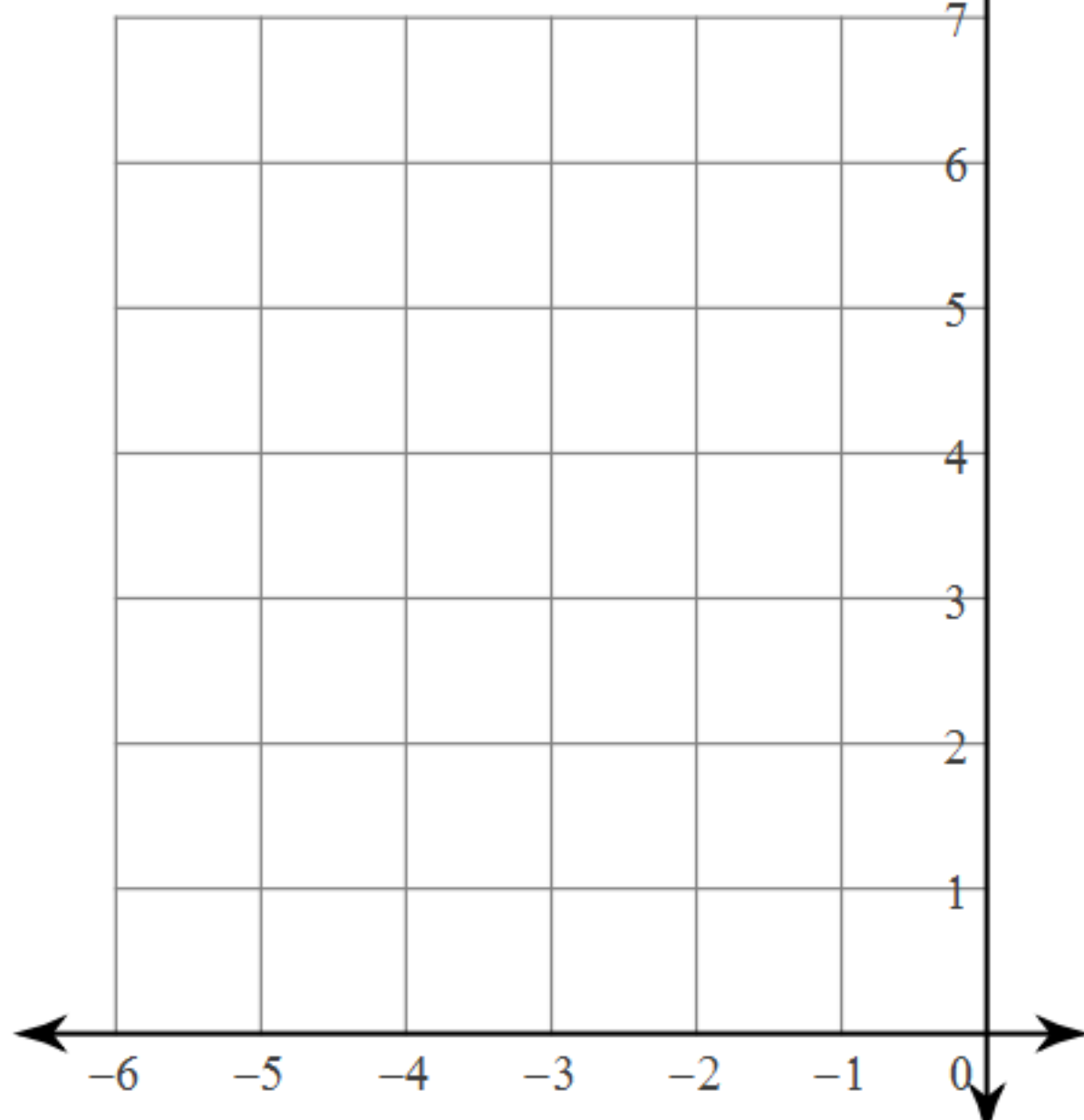


Graph each quadratic equation and then state the following under each graph: Maximum or minimum, Axis of symmetry, transformations, vertex.

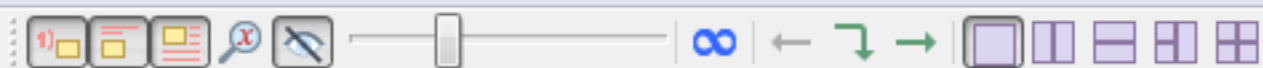
1) $y = (x + 3)^2 + 2$



$$y = (x+3)(x+3) + 2$$

$$y = x^2 + 3x + 3x + 9 + 2$$

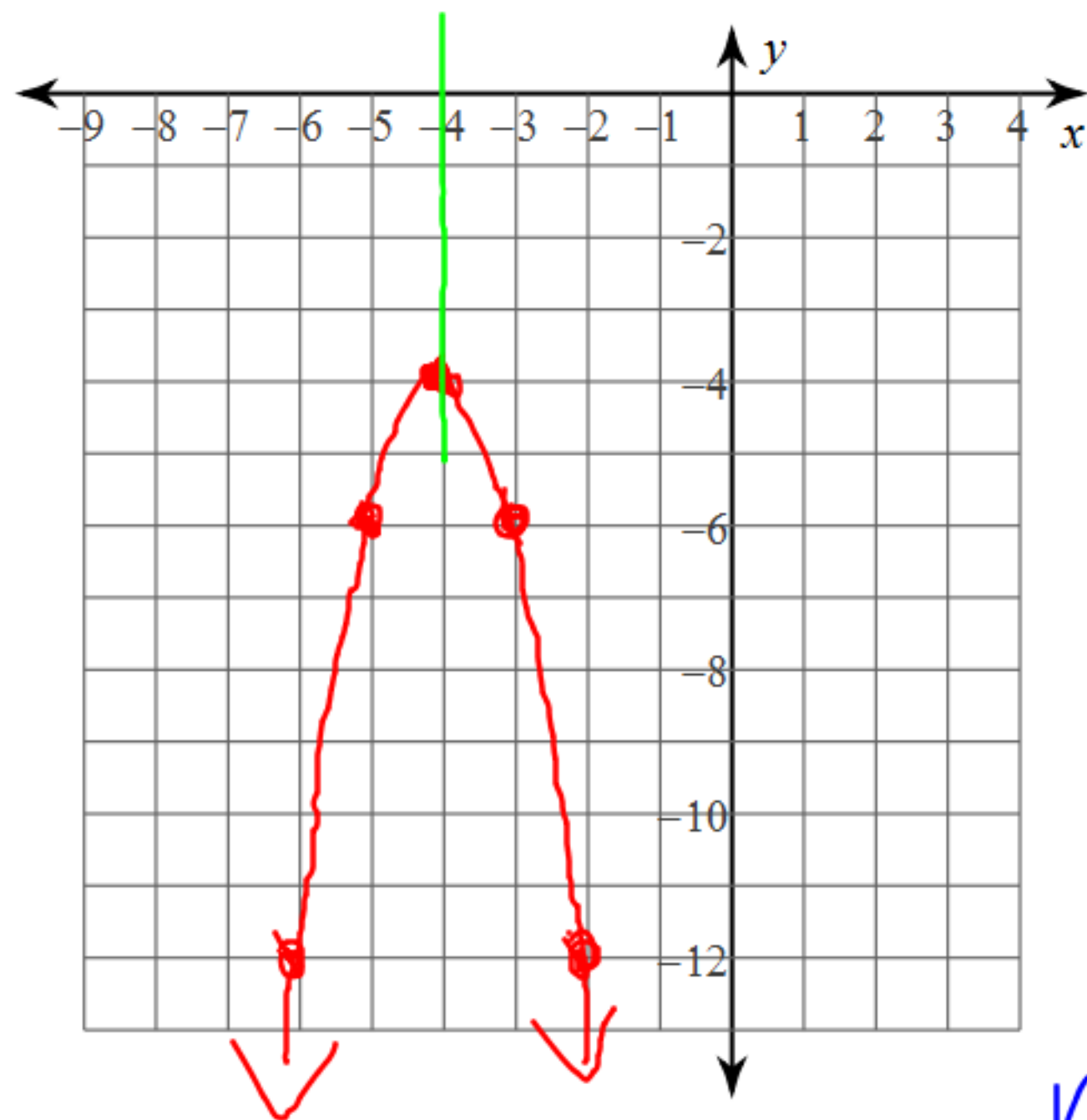
$$y = x^2 + 6x + 11$$



Sketch the graph of each function. CHANGE TO STANDARD FORM.

1) $y = -2(x + 4)^2 - 4$

vertex $(-4, -4)$



$$\begin{aligned}
 y &= -2(x + 4)(x + 4) - 4 \\
 y &= -2(x^2 + 4x + 4x + 16) - 4 \\
 y &= -2(x^2 + 8x + 16) - 4 \\
 y &= -2x^2 - 16x - 32 - 4 \\
 y &= -2x^2 - 16x - 36
 \end{aligned}$$

max $a.0.5 x = -4$

no zeroes

- On the board- change the equation from vertex form to standard form.
On the paper- graph the equation and list all of the transformations that the instructions require

When you are done...

Start working on the other questions. You will teach your question to the class on converting it.

HOMEWORK:

COMPLETE ALL QUESTIONS - graph every questions but you do not need to state the transform the questions other students did.

- change from vertex form to standard form
- graph the parabola
- state the vertex, max/min, a.o.s. and zeroes