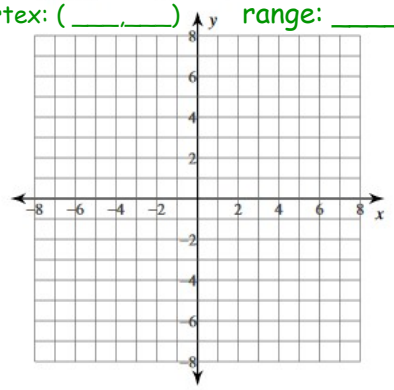
Name:_____ Graphing Quadratics

Identify the vertex and axis of symmetry of each. Then sketch the graph.

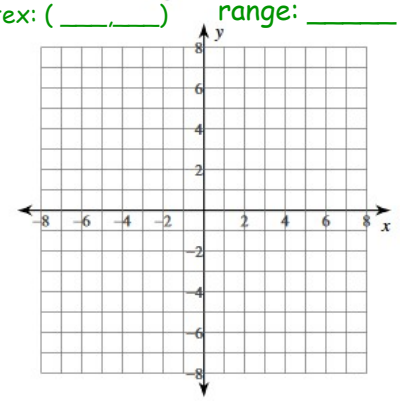
1. $f(x) = -3(x-2)^2 - 4$

vertex: (___,___) range: _____



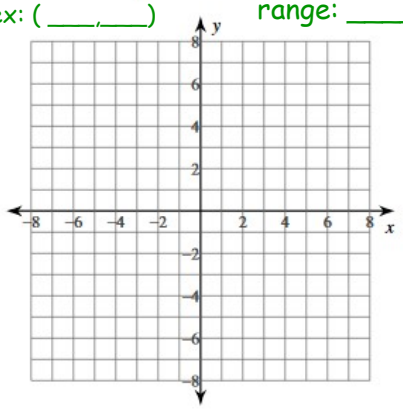
2. $f(x) = -\frac{1}{4}(x-1)^2 + 4$

vertex: (___,___) range: _____



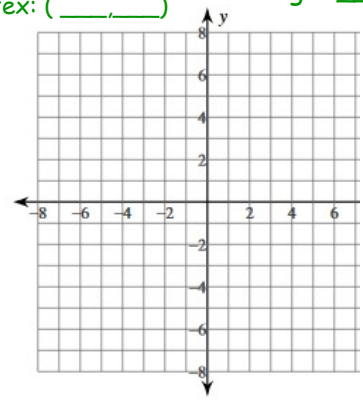
3. $f(x) = \frac{1}{4}(x+4)^2 + 3$

vertex: (___,___) range: _____



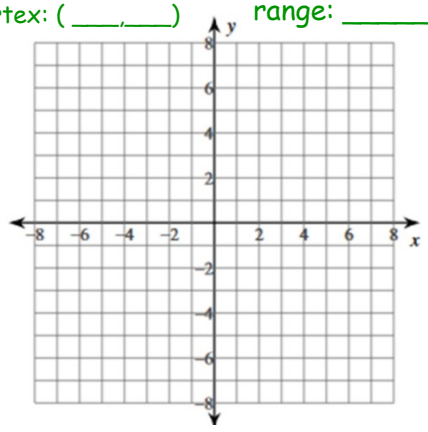
4. $f(x) = \frac{1}{4}(x+5)^2 + 2$

vertex: (___,___) range: _____



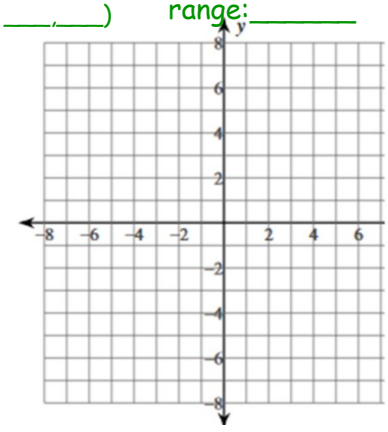
5. $f(x) = -2(x+5)^2 - 3$

vertex: (___,___) range: _____



6. $f(x) = (x+2)^2 - 1$

vertex: (___,___) range: _____

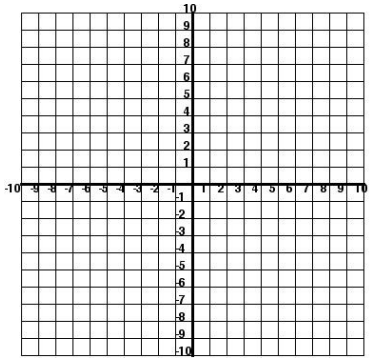


Find the x intercepts and use them to find the vertex. Then graph.

7. $y = -2(x - 1)(x + 3)$

x intercept:_____,_____

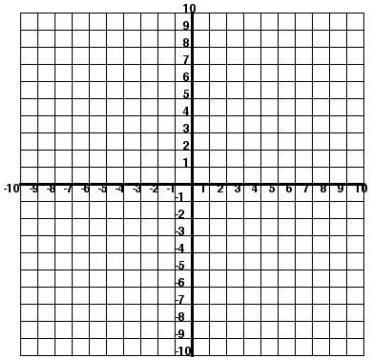
vertex: (___,___)



8. $y = (x + 4)(x - 2)$

x intercept:_____,_____

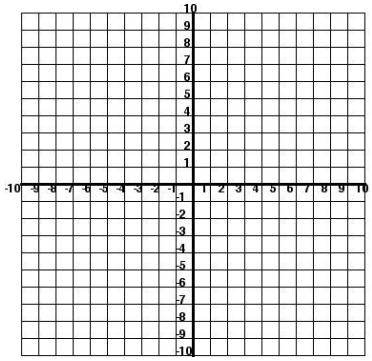
vertex: (___,___)



9. $y = 3(x + 5)(x + 1)$

x intercept:_____,_____

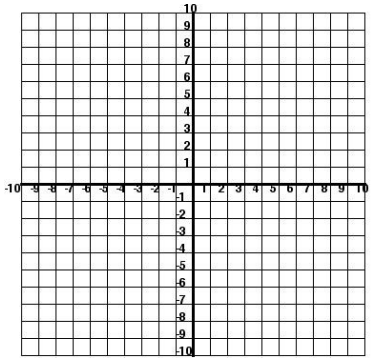
vertex: (___,___)



10. $y = (x + 3)(x - 3)$

x intercept:_____,_____

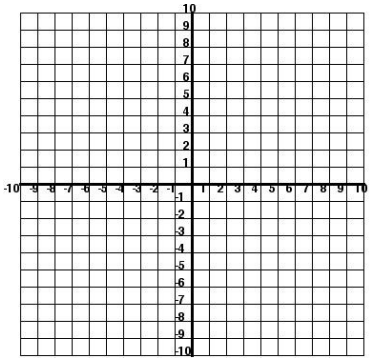
vertex: (___,___)



Pick any method to graph given that it's in standard form.

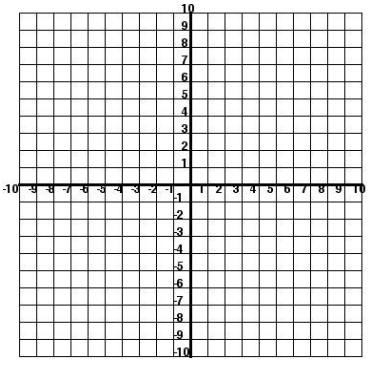
11. $y = x^2 + 2x - 15$

vertex: (___,___)



12. $y = -2x^2 - 4x + 7$

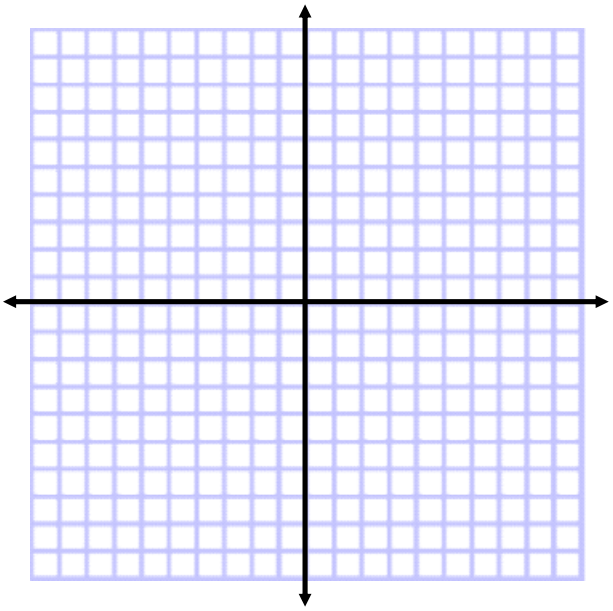
vertex: (___,___)



13. The price of gasoline at a local station throughout the month of March is modeled by $y = -0.014x^2 + 0.448x - 2.324$ where $x = 1$ corresponds to March 1.

A. On what day in March did the price of gasoline reach its maximum?

B. What was the highest price of gasoline in March?



14. A baseball is hit so that its height above ground is given by the equation $h = -16t^2 + 96t + 4$, there h is the height in feet and t is the time in seconds after it is hit. How long does it take for the baseball to reach its highest point? How high will it go?