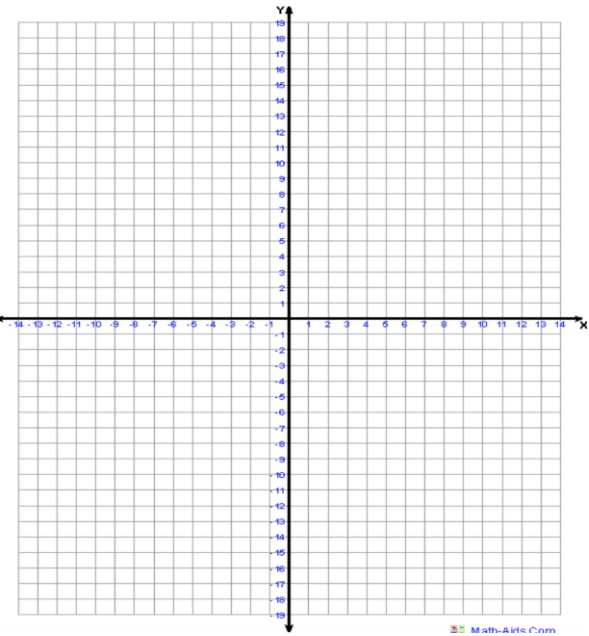Graph the following equations. **<u>FIND AND LABEL</u>** all key features of the equation.

1. $y = -x^2 + 6x + 16$

Vertex _____   A.O.S_____

Maximum or Minimum?

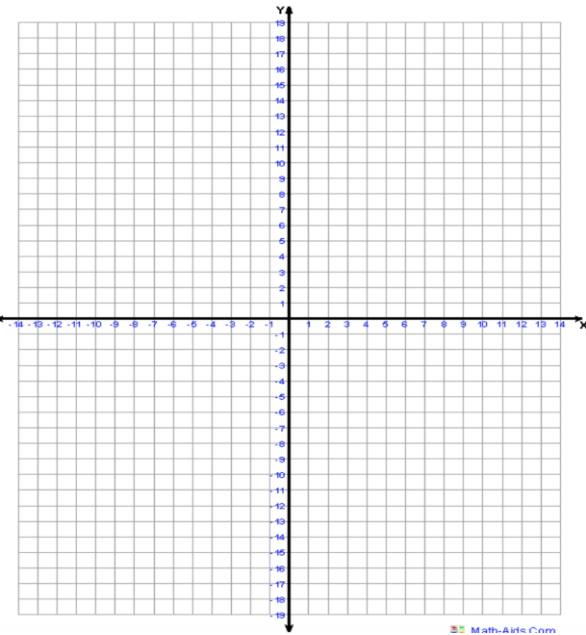y-intercepts_____   x-intercepts _____

Domain _____   Range _____

Interval of Increasing _____

Interval of Decreasing _____

Graph the following equations. **FIND AND LABEL** all key features of the equation.

1. $y = \frac{1}{4}(x + 8)(x - 6)$

Vertex _____   A.O.S_____

Maximum or Minimum?

y-intercepts_____   x-intercepts _____
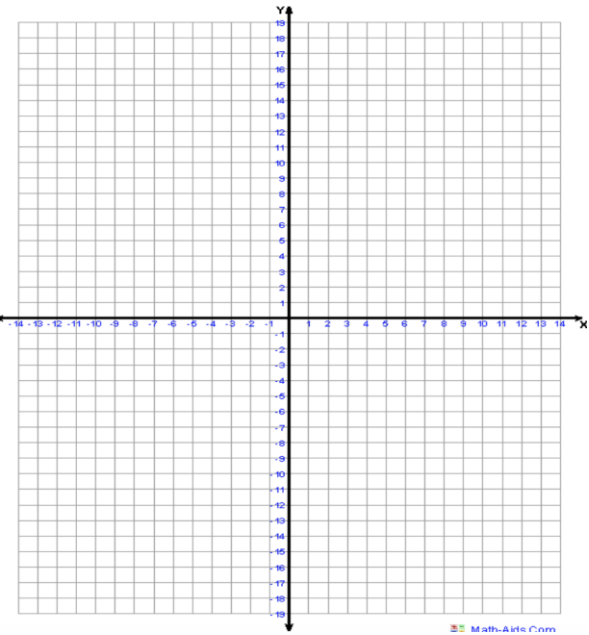
Domain _____   Range _____

Interval of Increasing _____

Interval of Decreasing _____

Graph the following equations. **FIND AND LABEL** all key features of the equation.

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

Vertex _____   A.O.S_____
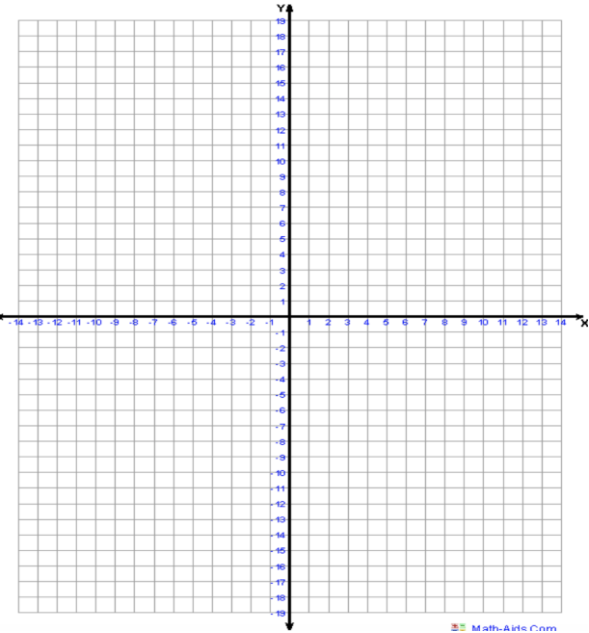
Maximum or Minimum?

y-intercepts_____

Domain _____   Range _____

Interval of Increasing _____

Interval of Decreasing _____

Graph the following equations. **FIND AND LABEL** all key features of the equation.

1. $y = 2x^2 + 3x - 14$

Vertex _____   A.O.S_____

Maximum or Minimum?

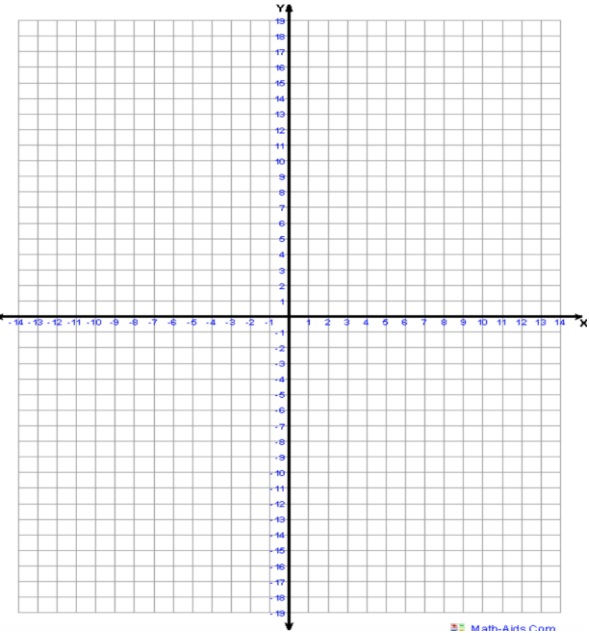y-intercepts_____   x-intercepts _____

Domain _____   Range _____

Interval of Increasing _____

Interval of Decreasing _____

Graph the following equations. **FIND AND LABEL** all key features of the equation.

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

Vertex _____   A.O.S_____

Maximum or Minimum?

y-intercepts_____   x-intercepts _____
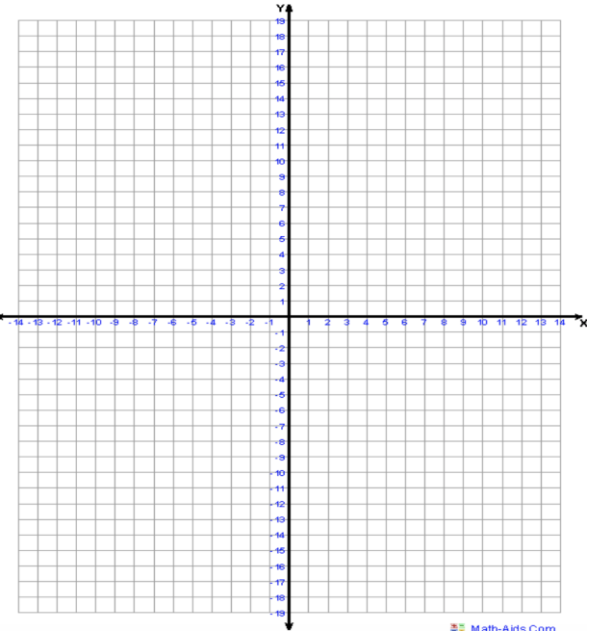
Domain _____   Range _____

Interval of Increasing _____

Interval of Decreasing _____

Write the equation in vertex form by completing the square.

$$y = x^2 + 6x + 15$$

Vertex Form _____

Vertex _____   AOS _____

y-intercept _____

Domain _____   Range _____

Interval of Increasing _____

Interval of Decreasing _____