Answer the following concept questions:

How do you find the vertex of a parabola written in standard form? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What steps are taken to find the vertex, AOS, and all intercepts?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

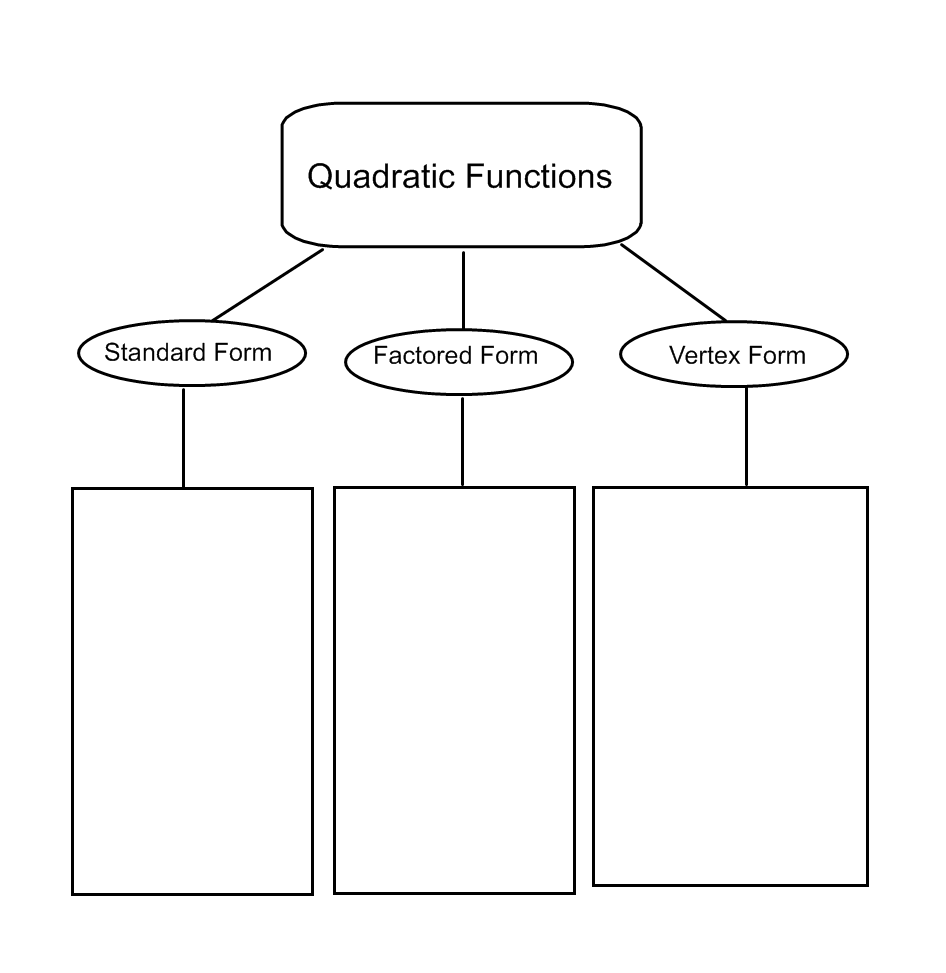
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How do you find the vertex of a parabola written in vertex form? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

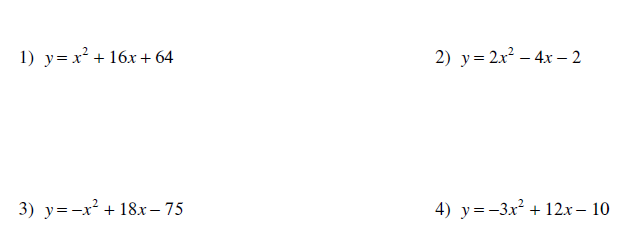
What steps are taken to find the vertex, AOS, and all intercepts?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you find the vertex of a parabola written in factored form? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 What steps are taken to find the vertex, AOS, and all intercepts?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For 1 – 8, (a) Identify the vertex (show work!); (b) Tell whether the graph of the function opens up or opens down; and (c) Give the equation for the AOS (axis of symmetry).**

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Graph the following functions and (a) describe if the graph is growth or decay, (b) asymptote line, and (c) one or two points on the graph.**

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

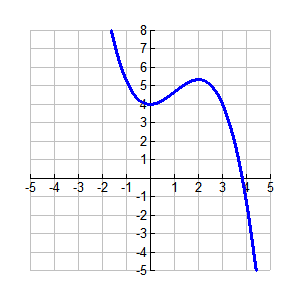
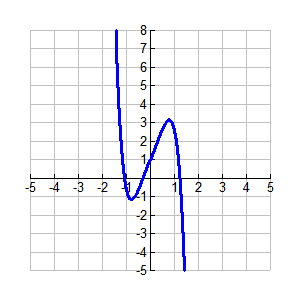
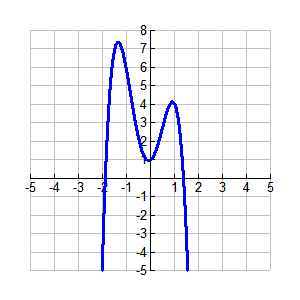
b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

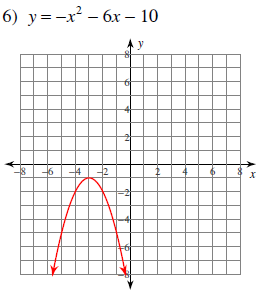
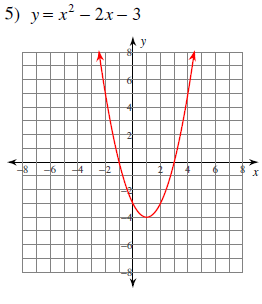
c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Describe the interval of increasing and decreasing on the following graphs.

15) 16) 17)

Increase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Increase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Increase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decrease \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Decrease \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Decrease \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Identify the vertex, AOS, and whether the vertex is a minimum value or a maximum value., then give the value. Also state the domain & range for each.**

Vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Equation of AOS: \_\_\_\_\_\_\_\_

Min. or Max? \_\_\_\_\_\_\_\_;

Value: y = \_\_\_\_\_\_\_\_

Domain: \_\_\_\_\_\_\_\_\_;

Range: \_\_\_\_\_\_\_\_\_\_\_

Vertex: \_\_\_\_\_\_\_\_\_\_

Equation AOS: \_\_\_\_\_\_\_\_\_\_

Min. or Max? \_\_\_\_\_\_\_\_;

Value: y = \_\_\_\_\_\_\_\_

Domain: \_\_\_\_\_\_\_\_\_;

Range: \_\_\_\_\_\_\_\_\_\_\_