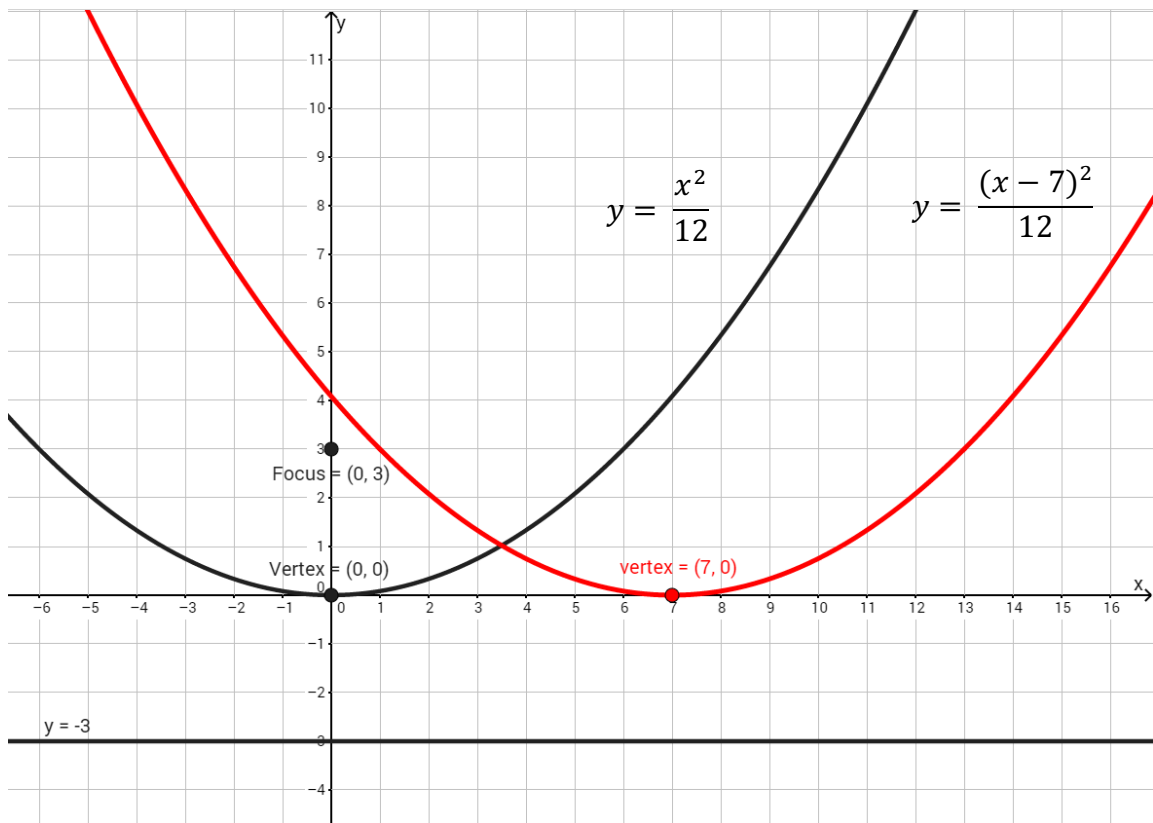1. The *p*-value of each parabola graphed below is 3. Add and label the focus of the red parabola to the graph.

2. Compare the two equations for the two parabolas. What is the same? What is different?

3. For the red parabola, the *h*-value is a positive 7. But there is a negative 7 in the equation. Where did the −7 come from? In your explanation, use the graph and the right triangle you used to derive the equation of the parabola.

$$y = \frac{x^2}{12}$$

$$y = \frac{(x-7)^2}{12}$$

Focus = (0, 3)

Vertex = (0, 0)

vertex = (7, 0)

y = -3