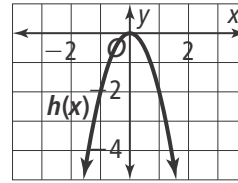
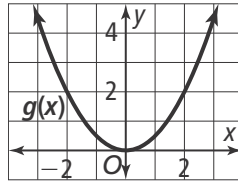
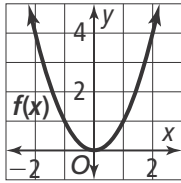




8-1 Reteach to Build Understanding

Key Features of Quadratic Functions

1. Determine whether each statement about the graphs f , g , and h are true or false.



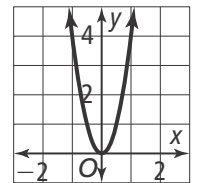
The vertex of each graph is at $(0, 0)$. _____

Graphs f and h have a minimum value. _____

Graph h has a negative value for a . _____

Graphs g and h have the same axis of symmetry. _____

2. Sasha wrote statements shown at the right and labeled them as true or false. She labeled two statements incorrectly. Identify these two statements and write the correct description or label.



a. Since $a > 0$, the graph opens upward. TRUE

b. Since $|a| > 1$, the shape of the parabola is wider than the quadratic parent function. TRUE

c. The vertex of the parabola is $(0, 0)$. TRUE

d. The axis of symmetry is the line $x = 0$. FALSE

3. Jose wants to graph the functions $f(x) = 0.25x^2$ and $g(x) = 1.25x^2$. Complete Jose's work on identifying key features of these graphs.

Key Feature	$f(x) = 0.25x^2$	$g(x) = 1.25x^2$
Vertex	$(0, 0)$	
Axis of Symmetry	$x = 0$	
Direction Parabola Opens	upward	
Narrower or Wider Than $f(x) = x^2$	narrower	
Endpoints Over Interval $2 \leq x \leq 6$	$(2, 1); (6, 9)$	
Rate of Change Over Interval $2 \leq x \leq 6$	$f(x) = \frac{9-1}{6-2} = 2$	