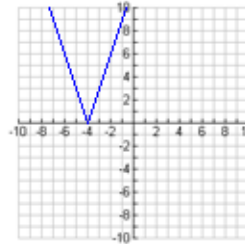
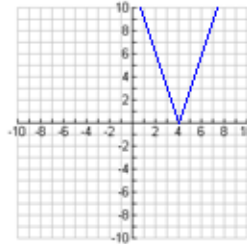
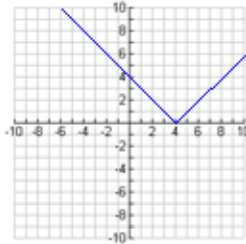
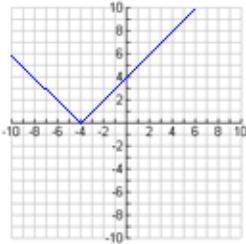




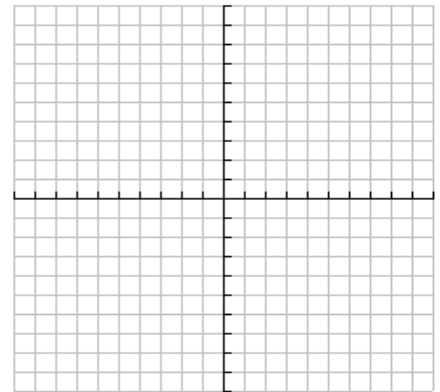
**PART A: TARGET 4A – UNDERSTANDING GRAPHS OF ABSOLUTE VALUE FUNCTIONS**

1. Which of the following is the correct graph for  $f(x) = 3|x + 4|$ ? (Circle your choice)



2. Consider the function  $h(x) = \frac{3}{4}|x - 2|$ .

- Graph  $g(x)$  on the grid provided.
- Where is the vertex on the graph of  $h(x)$ ?
- Describe the slope of each piece of the graph of  $h(x)$ .
- What's the domain of  $h(x)$ ?
- What's the range of  $h(x)$ ?



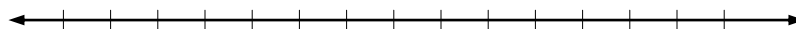
3. Compare and contrast the graphs of  $f(x) = \frac{3}{4}|x - 2|$  and  $g(x) = -4|x - 2|$ .



**PART B: TARGET 4B – UNDERSTANDING SOLUTIONS OF ABSOLUTE VALUE PROBLEMS**

4. Let  $f(x) = 2|x - 3|$ . Solve the equation  $f(x) \leq 8$  using a table, a graph, and with algebra.

Show your solution on a number line.



5. To ride on the new roller coaster "Screamer", a rider's height,  $H$  (in inches) must be such that  $|H - 60| \leq 20$ .

- Solve this inequality using algebra.
  
  
  
  
  
  
  
  
  
  
- Show your answer on a number line.
  
  
  
  
  
  
  
  
  
  
- What's the tallest a rider can be? Shortest?