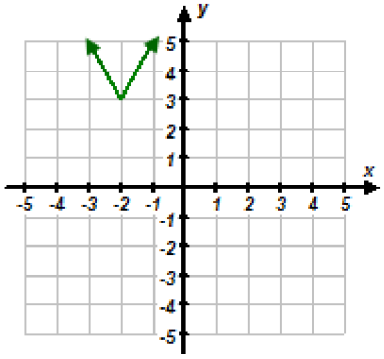
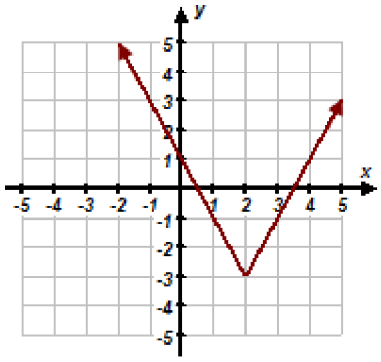
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

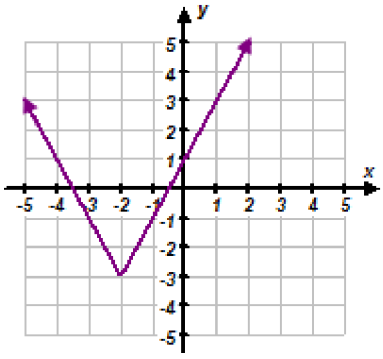
04-08 Sample Quiz - Graphing Absolute, Step, and Parital Functions

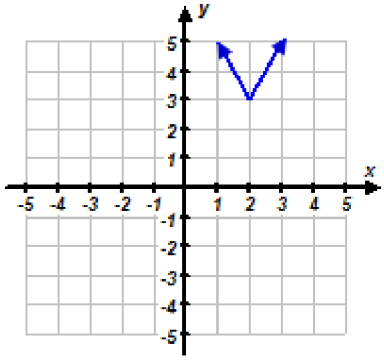
Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following is the graph of $f(x) = 2|x + 2| - 3$?

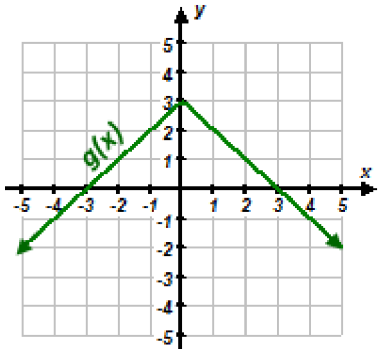
a.


c.


b.


d.


____ 2. Write the equation for the graph of ***g(x)***.



a. $g(x) = |x - 3|$
b. $g(x) = |x + 3|$
c. $g(x) = -|x| + 3$
d. $g(x) = |-x| + 3$

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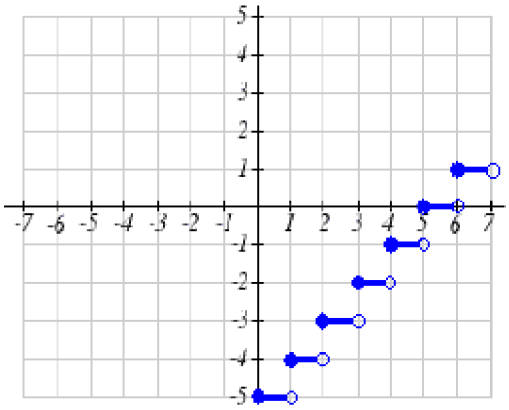
____ 3.

Write the function for the graph of ***h(x)***.



a. $h(x) = 5[\![x]\!]$

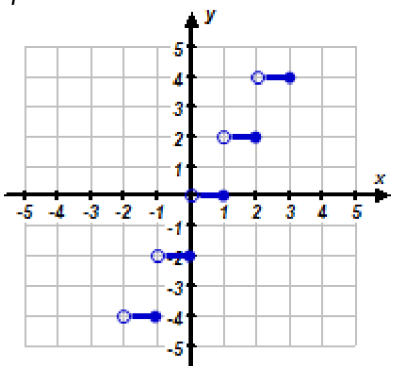
b. $h(x) = [\![x + 5]\!]$

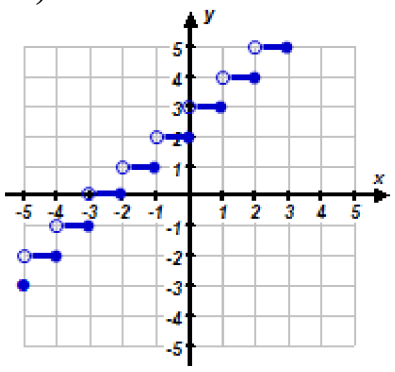
c. $h(x) = [\![x]\!] + 5$

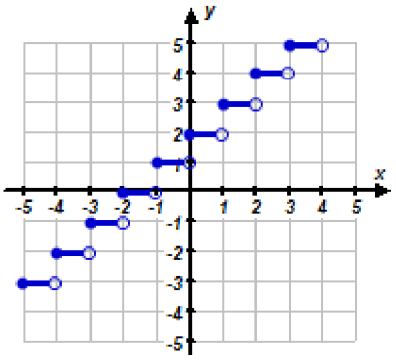
d. $h(x) = [\![x]\!] - 5$

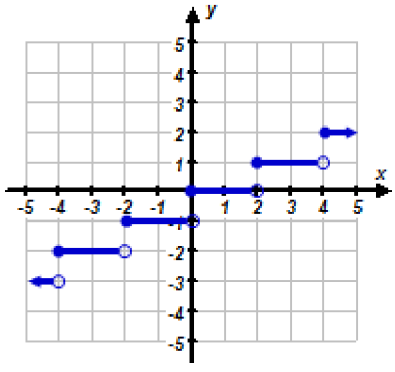
____ 4. Which of the following is the graph of $f(x) = \left\lfloor \frac{1}{2}x \right\rfloor$?

(This function is sometimes also written as: $f(x) = [\![\frac{1}{2}x]\!]$*)*

a. 

c. 

b. 

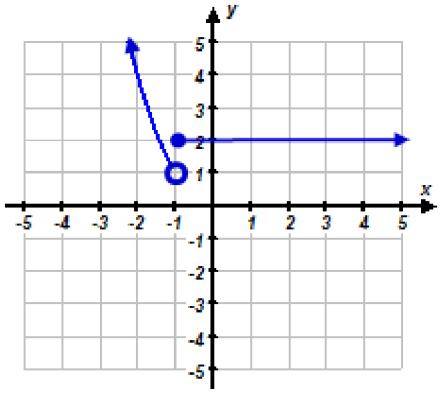
d. 

____ 5.

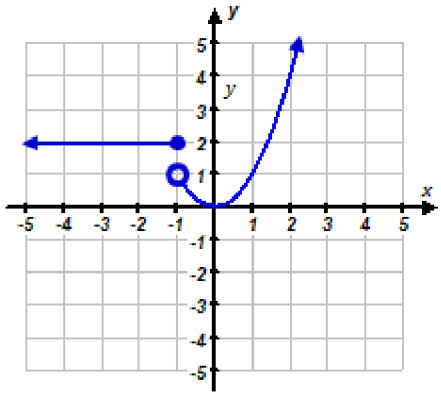
Which is the correct graph of the partial function:

$$f(x) = \begin{cases} x^2 & \text{if} \quad x < -1 \\ 2 & \text{if} \quad x \geq -1 \end{cases}$$

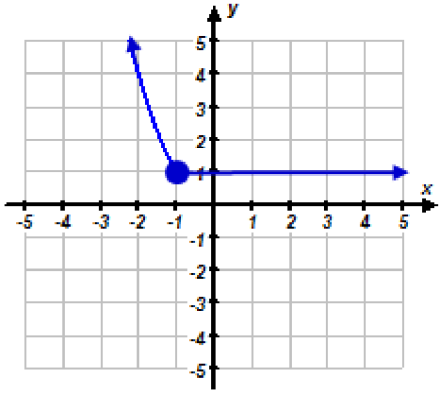
a.



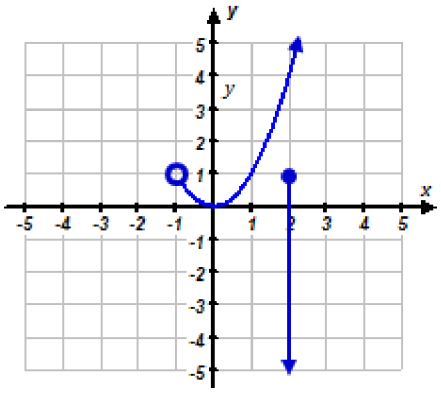
c.



b.



d.



____ 6. Consider the Piece-wise graph described by the following equation:

$$y = \begin{cases} 4x + 1 & x < 3 \\ 2x - 1 & x \geq 3 \end{cases}$$

Determine the coordinates of the point on the graph where x = 3.

a. $(3, 1)$

b. $(3, 3)$

c. $(3, 5)$

d. $(3, 13)$

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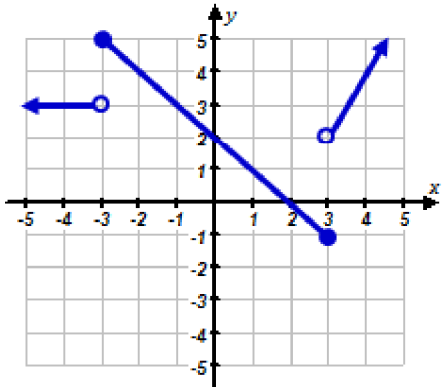
____ 7.

Which of the following set of piece-wise functions matches the graph shown?



a. $a(x) = \begin{cases} 3 & if \quad x < -3 \\ -x+2 & if \quad -3 \le x \le 3 \\ 2x-4 & if \quad x > 3 \end{cases}$

c. $c(x) = \begin{cases} 3 & if \quad x < -3 \\ 2x-1 & if \quad -3 \le x \le 3 \\ 2x-4 & if \quad x > 3 \end{cases}$

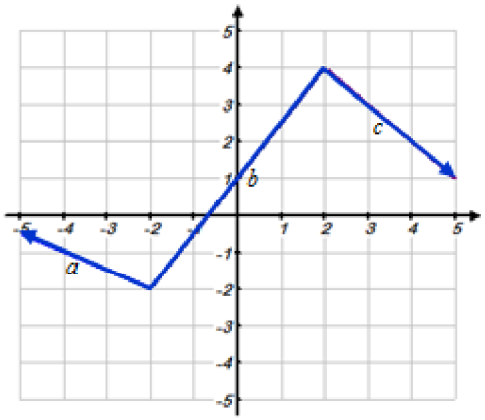
b. $b(x) = \begin{cases} 3 & if \quad x < -3 \\ -x+2 & if \quad -3 \le x \le 3 \\ -2x-2 & if \quad x > 2 \end{cases}$

d. $d(x) = \begin{cases} 3 & if \quad x < 3 \\ -x+2 & if \quad 5 \le x \le -1 \\ 2x-4 & if \quad x > 2 \end{cases}$

____ 8.

Consider the following piecewise function.

How would the portion of the graph labeled **'a'** be defined?



a. $y = -\frac{1}{2}x - 3 \ ; \ x < -2$

b. $y = -\frac{1}{2}x - 3 \ ; \ x > -2$

c. $y = \frac{1}{2}x - 6 \ ; \ x < -2$

d. $y = \frac{1}{2}x - 6 \ ; \ x > -2$