

1. Explain why the equation  $|m| = -3$  has no solution.

Solve. Show your work.

2.  $-9|m| = -63$

3.  $|3d| = 15$

4.  $|3x - 5| = 11$

5.  $-|m + 3| = -13$

6.  $|-4m| = 64$

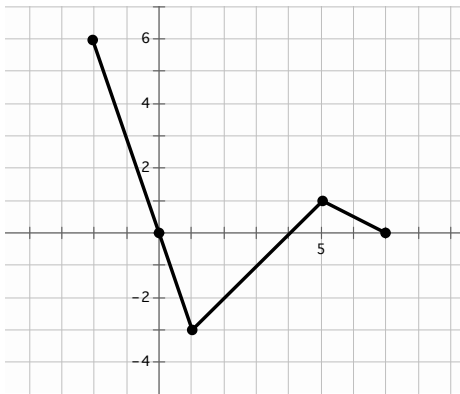
7.  $2|x + 1| - 7 = -3$

8.  $5|c + 3| - 1 = 9$

9.  $-2|2p - 3| - 1 = -11$

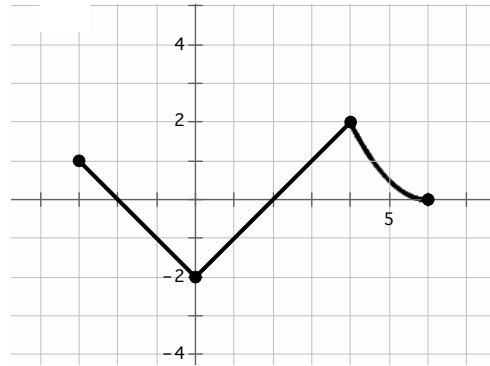
State the domain and range of the piecewise functions in the graph. Use interval notation. We can use interval notation because the functions are continuous.

10.



a. Domain:                      b. Range:

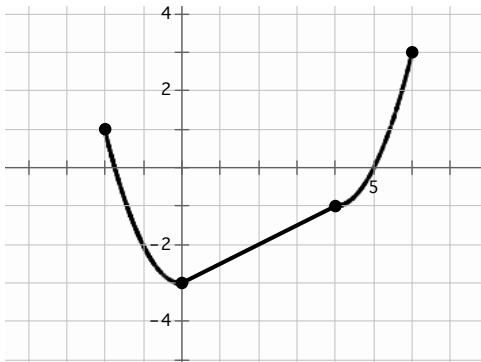
11.



a. Domain:                      b. Range:

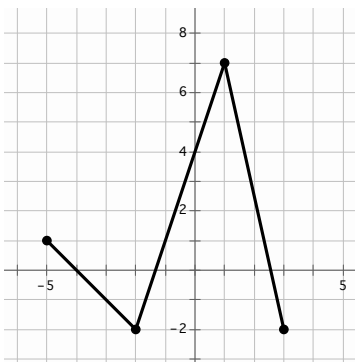
For each of the graphs below, write the interval that defines each piece of the graph. Then, write the domain of the entire piecewise function.

12.



a. Interval 1                      \_\_\_\_\_  
 b. Interval 2                      \_\_\_\_\_  
 c. Interval 3                      \_\_\_\_\_  
 d. Domain:                          \_\_\_\_\_

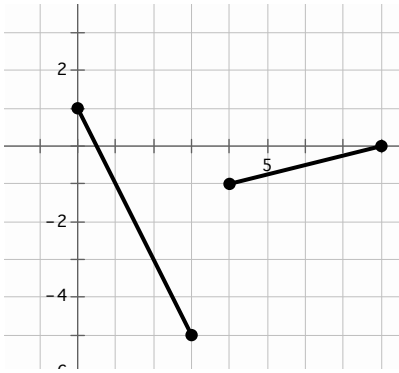
13.



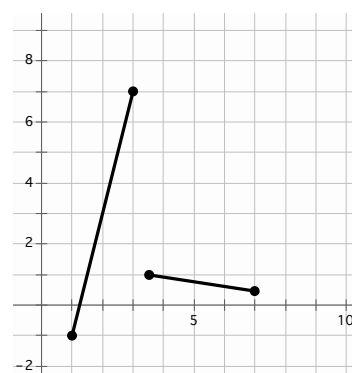
a. Interval 1                      \_\_\_\_\_  
 b. Interval 2                      \_\_\_\_\_  
 c. Interval 3                      \_\_\_\_\_  
 d. Domain:                          \_\_\_\_\_

Write the piecewise equations for the given graphs.

14.



15.



16. Beginning with the parent function  $f(x) = x^2$ , write the equation of the new function  $g(x)$  that is a transformation of  $f(x)$  as described. Then, graph it.

Shift  $f(x)$  left by 3 units,  
Stretch vertically by 2,  
Reflect  $f(x)$  vertically,  
And shift down 5 units.

$g(x) =$  \_\_\_\_\_

