

# Basic Transformations

Block: \_\_\_\_ Mark Out Of 15 \_\_\_\_

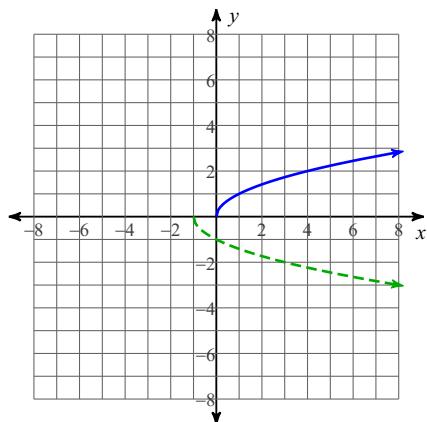
**Describe the transformations necessary to transform the graph of  $f(x)$  into that of  $g(x)$ . 5 marks**

1)  $f(x) = \sqrt{x}$   
 $g(x) = \sqrt{2(x+1)} + 2$

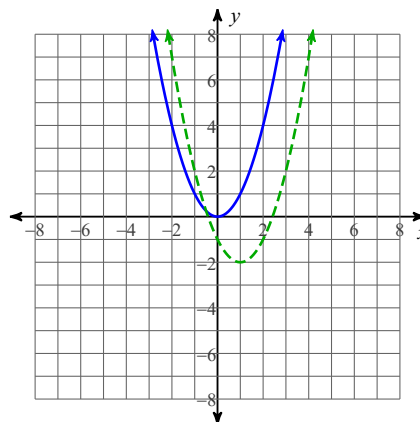
2)  $f(x) = x^3$   
 $g(x) = -(x-2)^3$

**Describe the transformations necessary to transform the graph of  $f(x)$  (solid line) into that of  $g(x)$  (dashed line). 4 marks**

3)

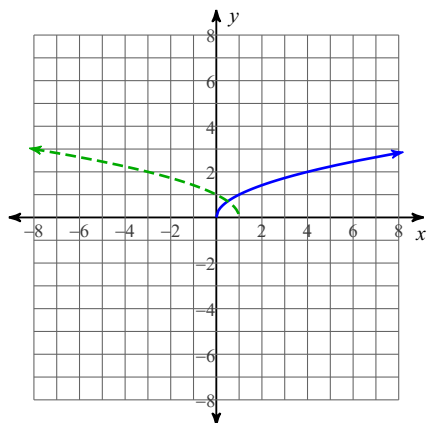


4)

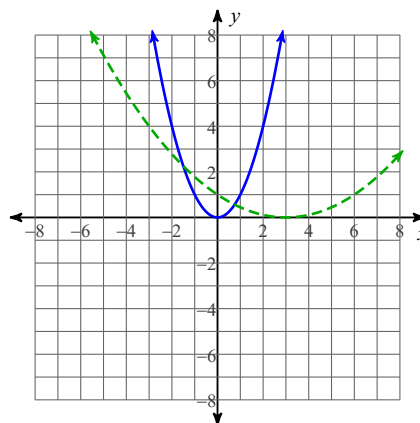


**Write  $g(x)$  (dashed line) in terms of  $f(x)$  (solid line).**

5)

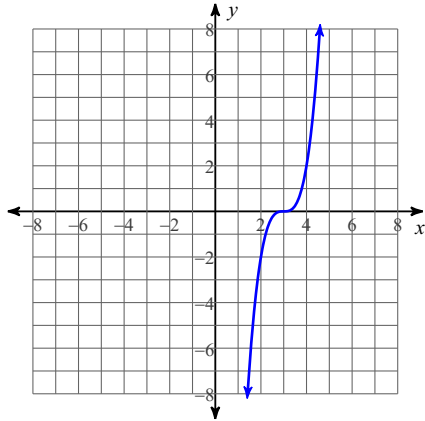


6)

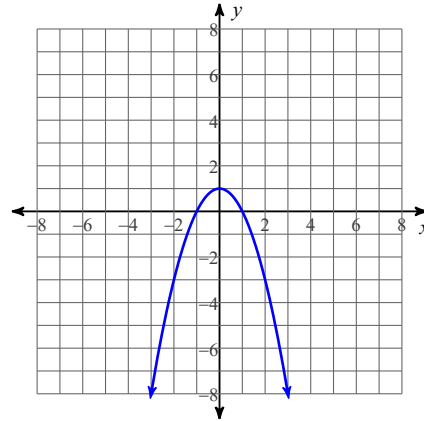


Identify the parent function  $f(x)$  and write an equation for the function given.

7)



8)



Transform the given function  $f(x)$  as described and write the resulting function as an equation.

- 9)  $f(x) = \sqrt{x}$   
 reflect across the y-axis  
 reflect across the x-axis  
 translate up 3 units

- 10)  $f(x) = \sqrt{x}$   
 reflect across the y-axis  
 compress vertically by a factor of 2  
 reflect across the x-axis