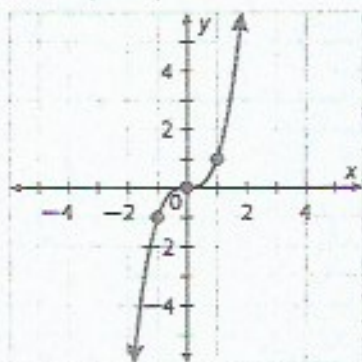


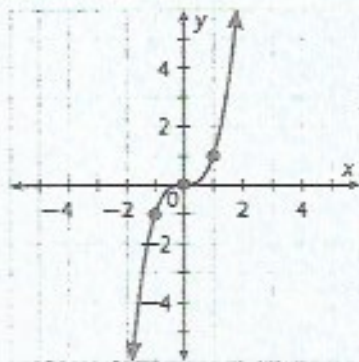
**LESSON**  
**5-1**
**Graphing Cubic Functions**
*Practice and Problem Solving: A/B*

Calculate the reference points for each transformation of the parent function  $f(x) = x^3$ . Then graph the transformation. (The graph of the parent function is shown.)

1.  $g(x) = (x-3)^3 + 2$

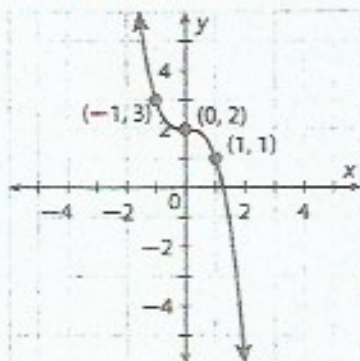


2.  $g(x) = -3(x+2)^3 - 2$

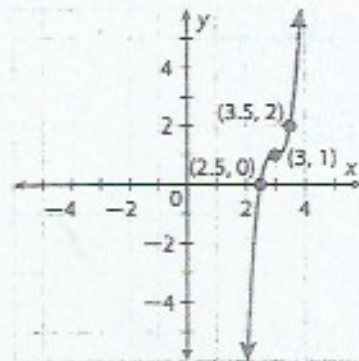


Write the equation of the cubic function whose graph is shown.

3.



4.



**Solve.**

- The graph of  $f(x) = x^3$  is reflected across the  $x$ -axis. The graph is then translated 11 units up and 7 units to the left. Write the equation of the transformed function.
- The graph of  $f(x) = x^3$  is stretched vertically by a factor of 6. The graph is then translated 9 units to the right and 3 units down. Write the equation of the transformed function.