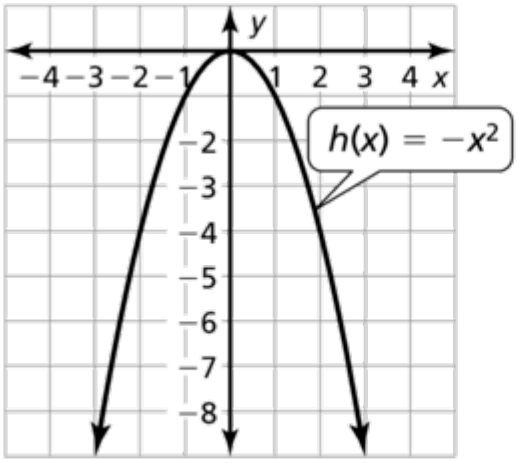
ANSWER PRESENTATION TOOL

Algebra 1 - Student Editi 8 Quiz 1-23 ALL EVEN ODD Show Sol

1. The vertex is (1, 4). The axis of symmetry is $x = 1$. The domain is all real numbers. The range is $y \leq 4$. When $x < 1$, y increases as x increases. When $x > 1$, y increases as x decreases.

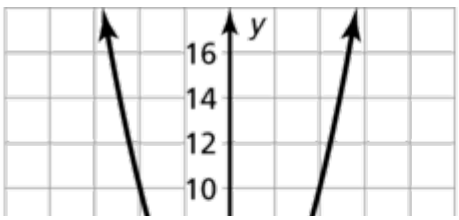
2. The vertex is $(-2, 5)$. The axis of symmetry is $x = -2$. The domain is all real numbers. The range is $y \geq 5$. When $x < -2$, y increases as x decreases. When $x > -2$, y increases as x increases.

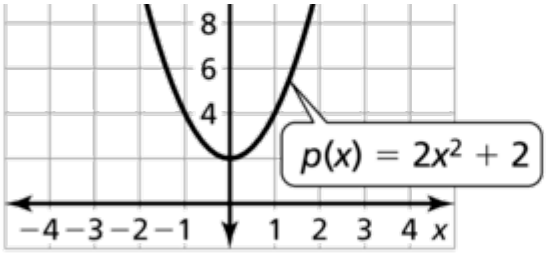
3.



The graph of h is a reflection in the x-axis of the graph of f.

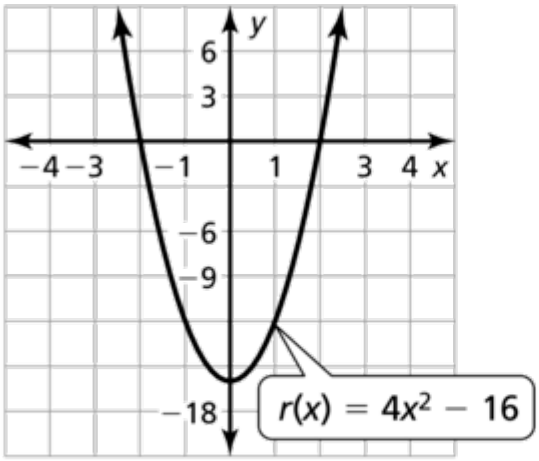
4.





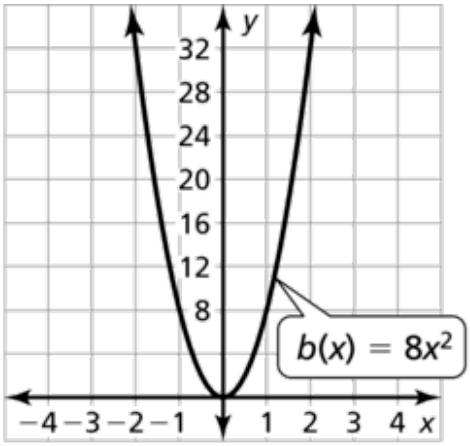
The graph of p is a vertical stretch by a factor of 2 and a vertical translation 2 units up of the graph of f.

5.



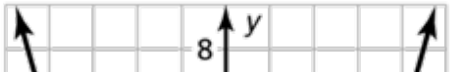
The graph of r is a vertical stretch by a factor of 4 and a vertical translation 16 units down of the graph of f.

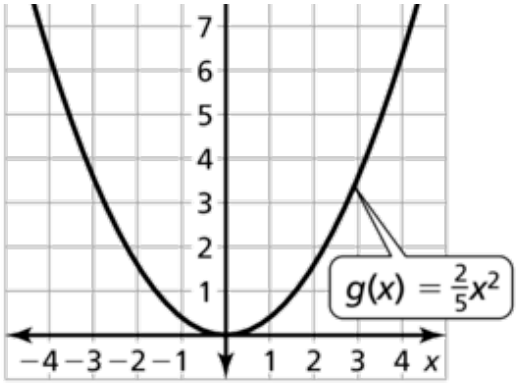
6.



The graph of b is a vertical stretch by a factor of 8 of the graph of f.

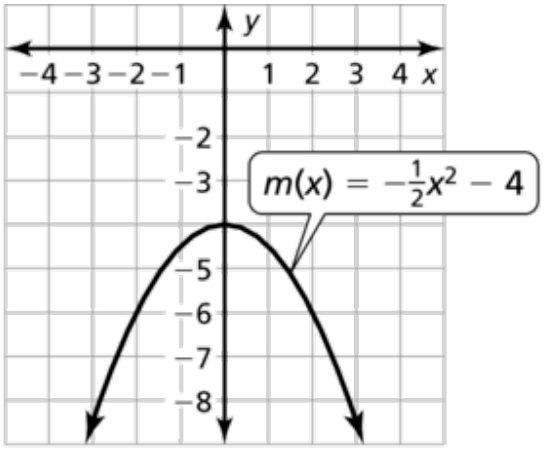
7.





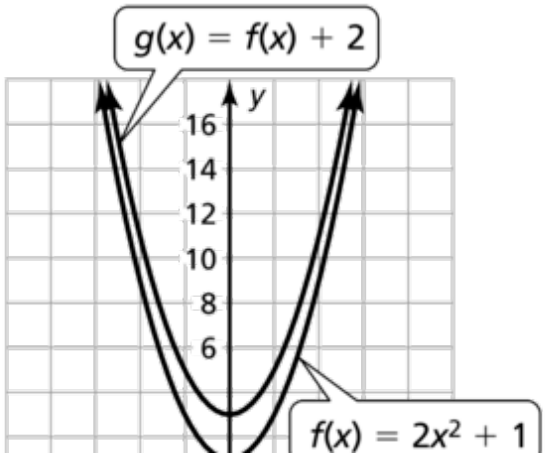
The graph of g is a vertical shrink by a factor of $\frac{2}{5}$ of the graph of f.

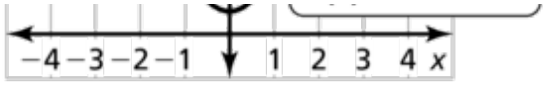
8.



The graph of m is a vertical shrink by a factor of $\frac{1}{2}$, a reflection in the x-axis, and a vertical translation 4 units down of the graph of f.

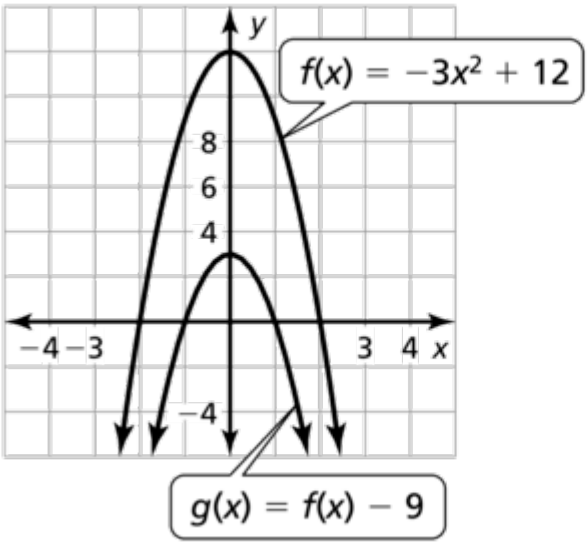
9. The graph of g is a vertical translation 2 units up of the graph of f.





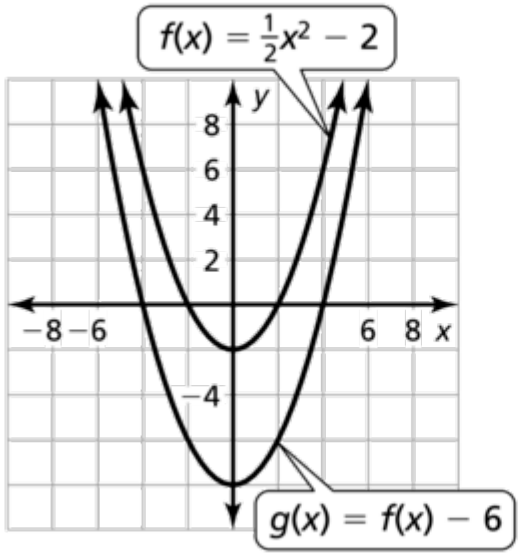
$g(x) = 2x^2 + 3$

10. The graph of g is a vertical translation 9 units down of the graph of f.



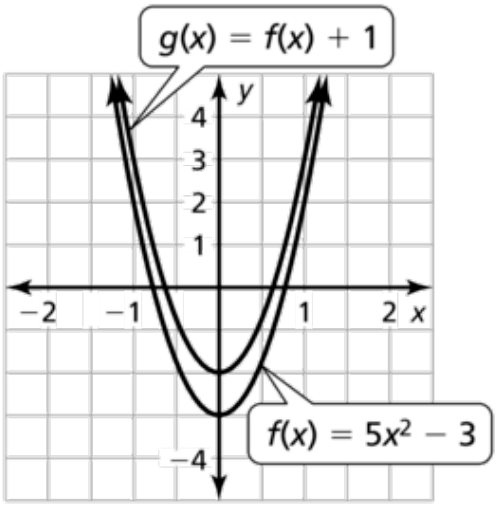
$g(x) = -3x^2 + 3$

11. The graph of g is a vertical translation 6 units down of the graph of f.



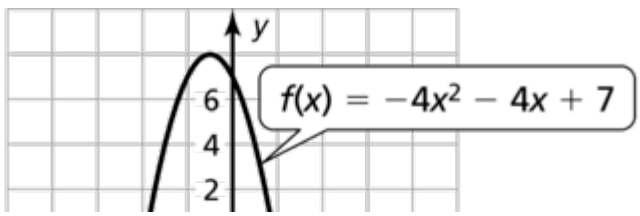
$g(x) = \frac{1}{2}x^2 - 8$

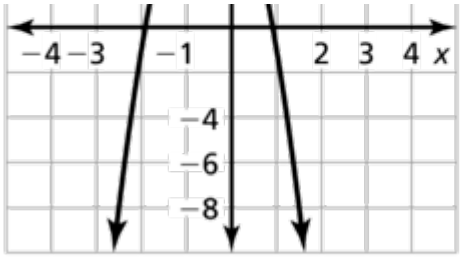
12. The graph of g is a vertical translation 1 unit up of the graph of f.



$g(x) = 5x^2 - 2$

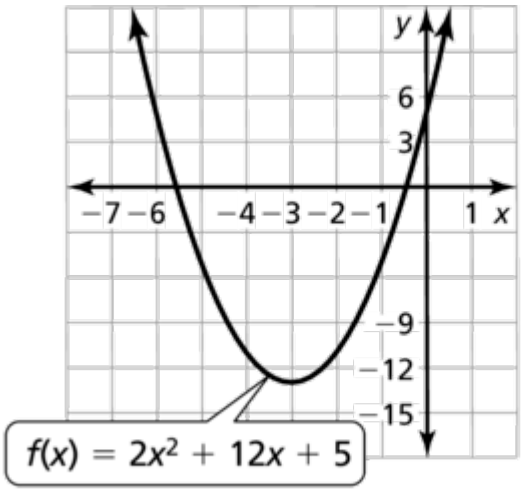
13.





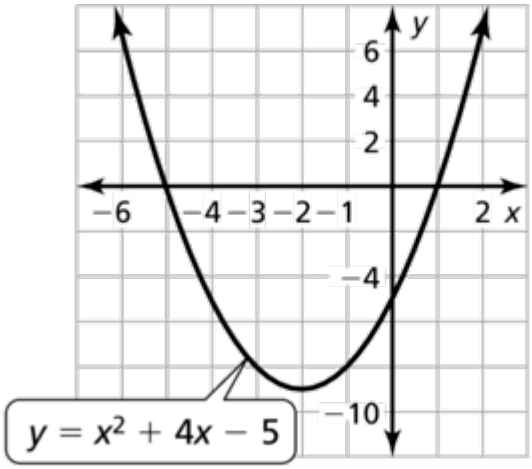
domain: all real numbers, range: $y \leq 8$

14.



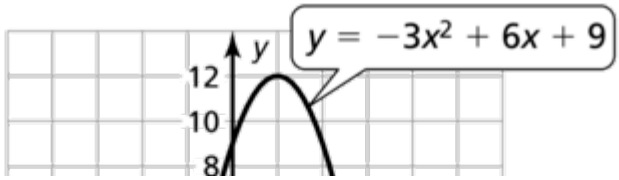
domain: all real numbers, range: $y \geq -13$

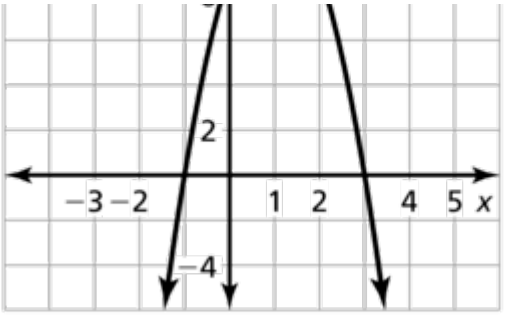
15.



domain: all real numbers, range: $y \geq -9$

16.





domain: all real numbers, range: $y \leq 12$

17. minimum value; -8

18. maximum value; 18

19. maximum value; 16

20. minimum value; -5

21. 2 sec

22. **a.** 1.25 sec

b. the first pinecone; *Sample answer:* The second pinecone will take 1.5 seconds to fall, which is longer than the first.

23. domain: $0 \leq t \leq 2$, range: $0 \leq h \leq 18$; 18 ft