Algebra 2 - Student Editic 1 Chapter Test

1-13

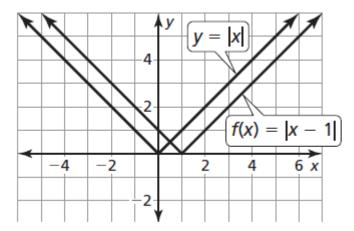
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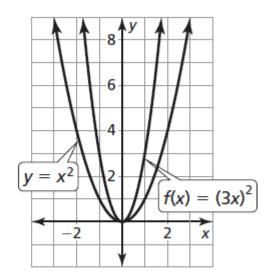
- 1. y = 200x; The balance increases \$200 each week and the initial balance is \$0.
- **2.**  $y = -\frac{1}{2}x + 50$ ; The price decreases \$0.50 for each 1% of discount, and the initial price is \$50.
- 3. (26, -3, 15)
- **4.**  $\left(3, -\frac{1}{12}, -\frac{1}{6}\right)$
- 5.  $\left(0, \frac{13}{14}, \frac{11}{14}\right)$

6.



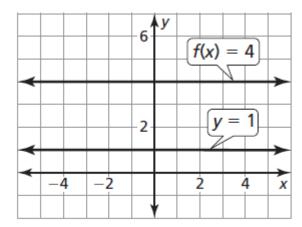
The graph of f is a translation 1 unit to the right of the parent absolute value function.

7.



The graph of f is a horizontal shrink by a factor of  $\frac{1}{3}$  of the parent quadratic function.

8.



The graph of f is a translation 3 units up of the parent constant function.

**9.** B; 
$$g(x) = 2x + 3$$

**10.** C; 
$$g(x) = 3x - 2$$

**11.** A; 
$$g(x) = -2x - 3$$

**12.** 75 doughnuts, 30 muffins and 25 bagels; The situation is modeled by the system:

$$d = 3b$$
  
 $d + m + b = 130$   
 $1d + 1.5m + 1.2b = 150$ 

13. horizontally shrink by a factor of  $\frac{1}{2}$ ; first fountain: 4 ft; second fountain: 3 ft; Substitute 4 into the equations  $f(t) = \frac{1}{4} |t - 20|$  and  $g(t) = \frac{1}{4} |2t - 20|$ .