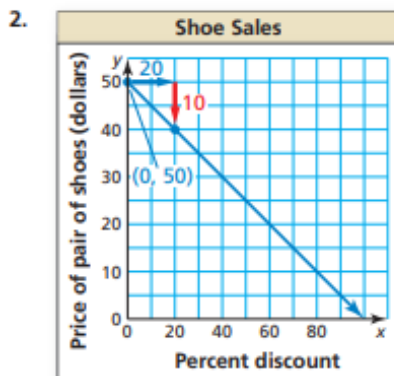
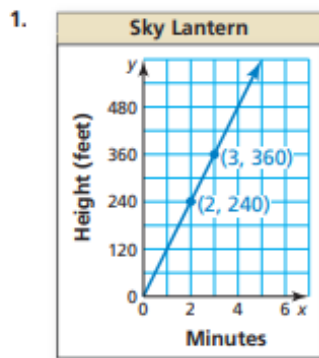


# 1 Practice Test WITH CalcChat®



Write an equation of the line and interpret the slope and y-intercept.



Solve the system. Check your solution, if possible.

3.  $-2x + y + 4z = 5$   
 $x + 3y - z = 2$   
 $4x + y - 6z = 11$

4.  $y = \frac{1}{2}z$   
 $x + 2y + 5z = 2$   
 $3x + 6y - 3z = 9$

5.  $x - y + 5z = 3$   
 $2x + 3y - z = 2$   
 $-4x - y - 9z = -8$

Graph the function and its parent function. Then describe the transformation.

6.  $f(x) = |x - 1|$

7.  $f(x) = (3x)^2$

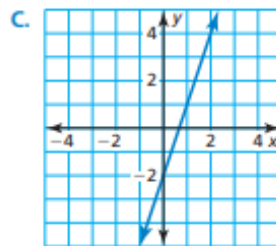
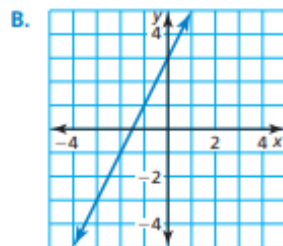
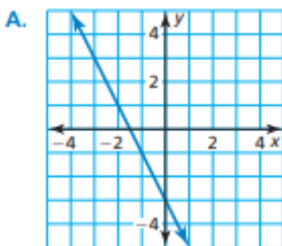
8.  $f(x) = \frac{1}{4}x - 5$

Match the transformation of  $f(x) = x$  with its graph. Then write a rule for  $g$ .

9.  $g(x) = 2f(x) + 3$

10.  $g(x) = 3f(x) - 2$

11.  $g(x) = -2f(x) - 3$



12. A bakery sells doughnuts, muffins, and bagels. The bakery makes three times as many doughnuts as bagels. The bakery earns a total of \$150 when all 130 baked items in stock are sold. How many of each item are in stock? Justify your answer.

13. A fountain with a depth of 5 feet is drained and then refilled. The water level (in feet) after  $t$  minutes can be modeled by  $f(t) = \frac{1}{4}|t - 20|$ . At the same time, a second fountain with the same depth is drained and filled twice as quickly as the first fountain. Describe how to transform the graph of  $f$  to model the water level in the second fountain after  $t$  minutes. When are the fountains at the same depth? Justify your answer.

Doughnuts ..... \$1.00  
 Muffins ..... \$1.50  
 Bagels ..... \$1.20

