

Use a separate sheet of graph paper to draw the graphs.

1. Graph the following equations on the same graph:

a. $y = 4x - 2$

b. $y = \frac{2}{3}x - 2$

c. $y = -\frac{3}{2}x + 2$

2. What do you notice about graph a compared to graph b ?

3. What do you notice about graph b compared to graph c ?

4. Pick a value for x and solve for y in the following equations, then make a table for x and y .

a. $x - y = 0$

b. $y - x = 0$

c. $3y - 2x = 0$

5. Draw a graph of the tables made in question 4. Draw all of them on the same graph.

6. A candle is 8 inches long. It burns down at a rate of 3 inches every 2 hours.

a. Make a table to represent the candle height while burning.

Time	Candle Height

b. Draw a graph of the candle height as it burns.

c. Write the equation to represent the height of the candle over time burning.

7. A second candle is 6 inches long. It burns down at a rate of $\frac{1}{2}$ inch every hour.

a. Make a table to represent the candle height while burning.

Time	Candle Height

b. Draw a graph of the candle height as it burns. Draw it on the same graph as question 6.

c. Write the equation to represent the height of the candle over time burning.

d. Do the graphs in question 6 and 7 cross each other?

e. If so, what does the crossing of the lines represent?

8. You plant a tree in your yard. The tree starts out 3 feet tall. The tree grows at a steady rate of 2 feet every 3 years.

a. Draw a graph to represent your tree growing over time.

b. Write the equation to represent your graph.

9. Your car averages 30 miles per gallon and has a 13 gallon gas tank.

a. Draw a graph to represent the amount of gas in the tank compared to miles driven.

b. Write the equation to represent gas in the tank to miles driven.

c. How many gallons would you have left in the tank after driving 75 miles?

10. Find the slope of the line between the following 2 points.

a. $(-3,1)$ and $(5,3)$

b. $(6,-3)$ and $(-5,2)$

c. $(-6,-2)$ and $(9,-2)$

11. A family went to a baseball game. They parked the car in a parking lot which charged \$5. The cost per ticket was \$21.

a) Write an equation for the total cost of going to the baseball game, where y is the total cost and x is the number of people.

b) If the family spent \$110, how many people went to the game?