

Lesson Summary

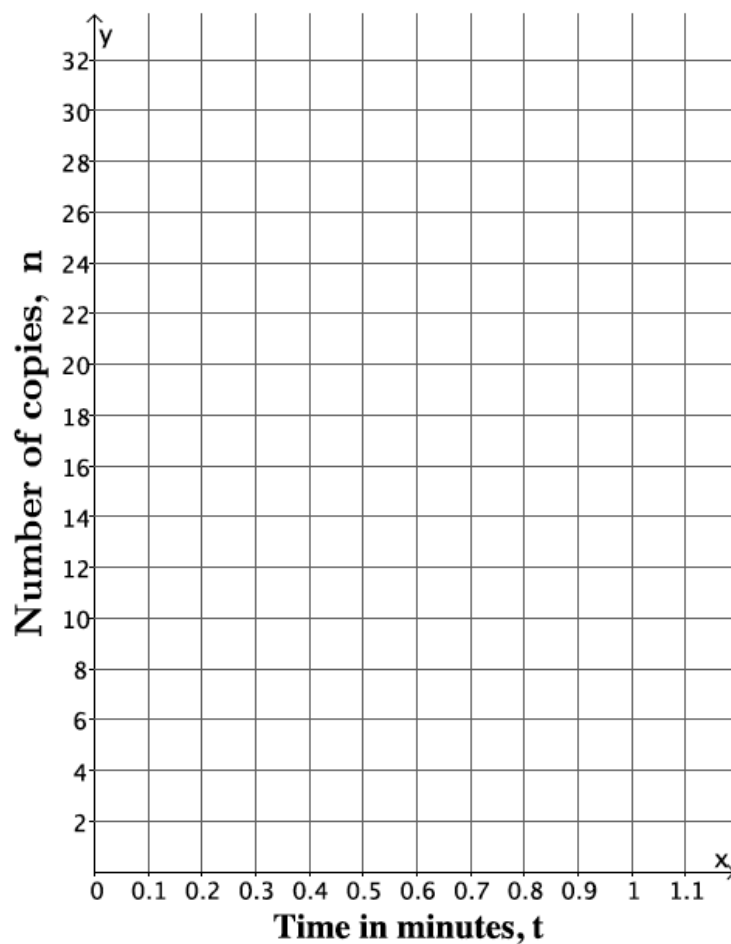
When constant rate is stated for a given problem, then you can express the situation as a two-variable equation. The equation can be used to complete a table of values that can then be graphed on a coordinate plane.

Problem Set

- A train travels at a constant rate of 45 miles per hour.
 - What is the distance, d , in miles, that the train travels in t hours?
 - How many miles will it travel in 2.5 hours?
- Water is leaking from a faucet at a constant rate of $\frac{1}{3}$ gallon per minute.
 - What is the amount of water, w , in gallons per minute, that is leaked from the faucet after t minutes?
 - How much water is leaked after an hour?
- A car can be assembled on an assembly line in 6 hours. Assume that the cars are assembled at a constant rate.
 - How many cars, y , can be assembled in t hours?
 - How many cars can be assembled in a week?
- A copy machine makes copies at a constant rate. The machine can make 80 copies in $2\frac{1}{2}$ minutes.
 - Write an equation to represent the number of copies, n , that can be made over any time interval in minutes, t .
 - Complete the table below.

t (time in minutes)	Linear Equation:	n (number of copies)
0		
0.25		
0.5		
0.75		
1		

- c. Graph the data on a coordinate plane.

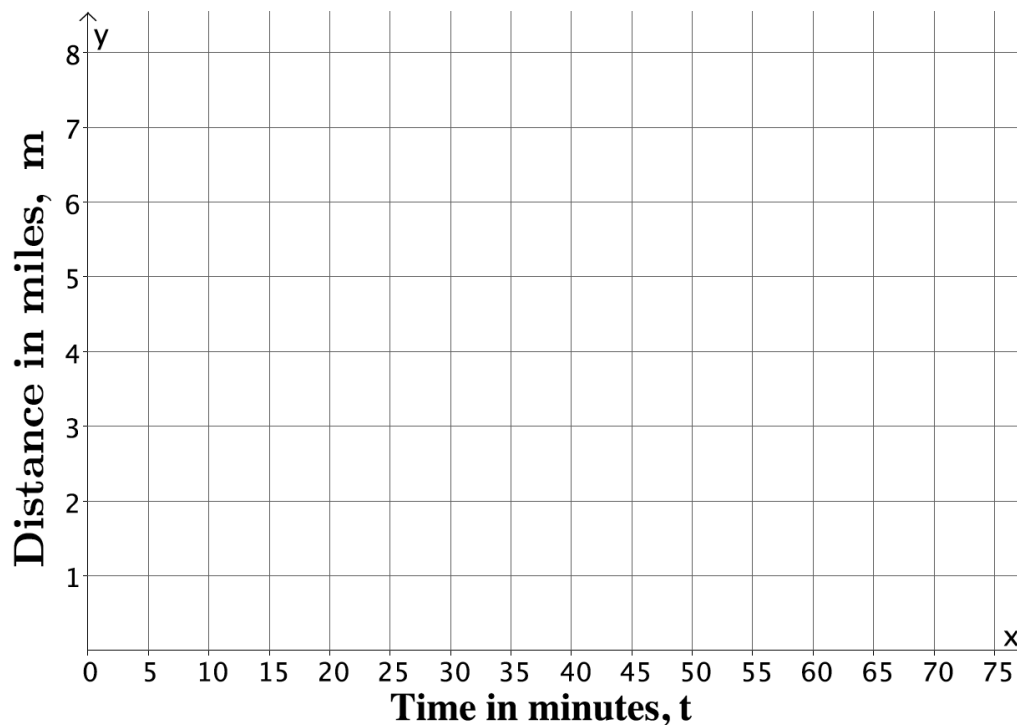


- d. The copy machine runs for 20 seconds and then jams. About how many copies were made before the jam occurred? Explain.

5. Connor runs at a constant rate. It takes him 34 minutes to run 4 miles.
- Write the linear equation in two variables that represents the number of miles Connor can run in any given time interval in minutes, t .
 - Complete the table below. Use a calculator, and round answers to the tenths place.

t (time in minutes)	Linear Equation:	m (distance in miles)
0		
15		
30		
45		
60		

- Graph the data on a coordinate plane.



- Connor ran for 40 minutes before tripping and spraining his ankle. About how many miles did he run before he had to stop? Explain.