

Linear Functions & Proportionality

1. A linear function has the table of values below. It gives the number of miles a car travels over a given number of hours.

Number of hours traveled (x)	3.5	3.75	4	4.25
Distance in miles (y)	203	217.5	232	246.5

a) Describe in words the function given.

b) Write the equation that gives the distance traveled, in miles, as a linear function of the number of hours spent driving.

c) Assume that the person driving the car is going on a road trip to reach a location 500 miles from her starting point. How long will it take the person to get to the destination

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Number of hours traveled (x)	3.5	3.75	4	4.25
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a) Describe in words the function given.

The total distance traveled is a function of the number of hours spent traveling.

b) Write the equation that gives the distance traveled, in miles, as a linear function of the number of hours spent driving.

$$y = \frac{203}{3.5}x$$
$$y = 58x$$

c) Assume that the person driving the car is going on a road trip to reach a location 500 miles from her starting point. How long will it take the person to get to the destination

$$500 = 58x$$
$$\frac{500}{58} = x$$
$$8.6206... = x$$
$$8.6 \approx x$$

It will take about 8.6 hours to travel 500 miles.

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