

Name: _____

Finding SLOPE

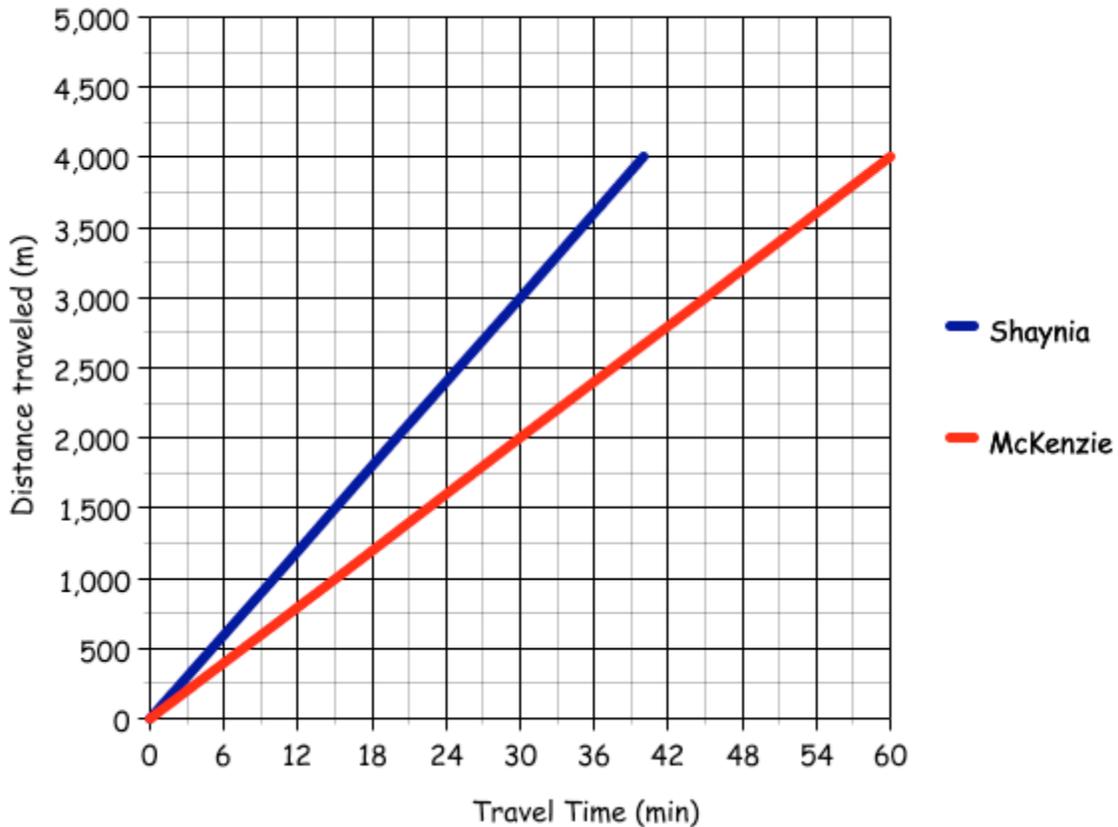
Shaynia and McKenzie hired a personal trainer to condition for the local Lighthouse Run/Walk. The personal trainer, Matt, recorded their times and the distance walked.

The red and blue lines on the coordinate plane below show the distances that Shaynia and McKenzie walked over time. You and your partner each choose one of the lines.

- a. Work on your own. Choose at least three different travel times. For each time find the distance traveled. Record your results in the table below.

Time (min)	Distance (m)	Rate (m/min)

Walking Distances



- b. Compare your tables. Which person is walking at a faster rate?
- Similarities:

 - Differences:
- c. How do the graphs show who is walking at a faster rate?
- d. Suppose another friend joins the conditioning group and has a faster walking rate than the rates you found. How would a line graph of this friend's distance walked over time compare with the graphs shown?
- e. What other factors would affect the distance you can cover in a given amount of time?
- f. How would the graph appear if the women stopped to get a drink of water at a nearby park?
- g. How would the graph appear if their personal trainer had the women walk up hills?

Finding SLOPE

Answer key

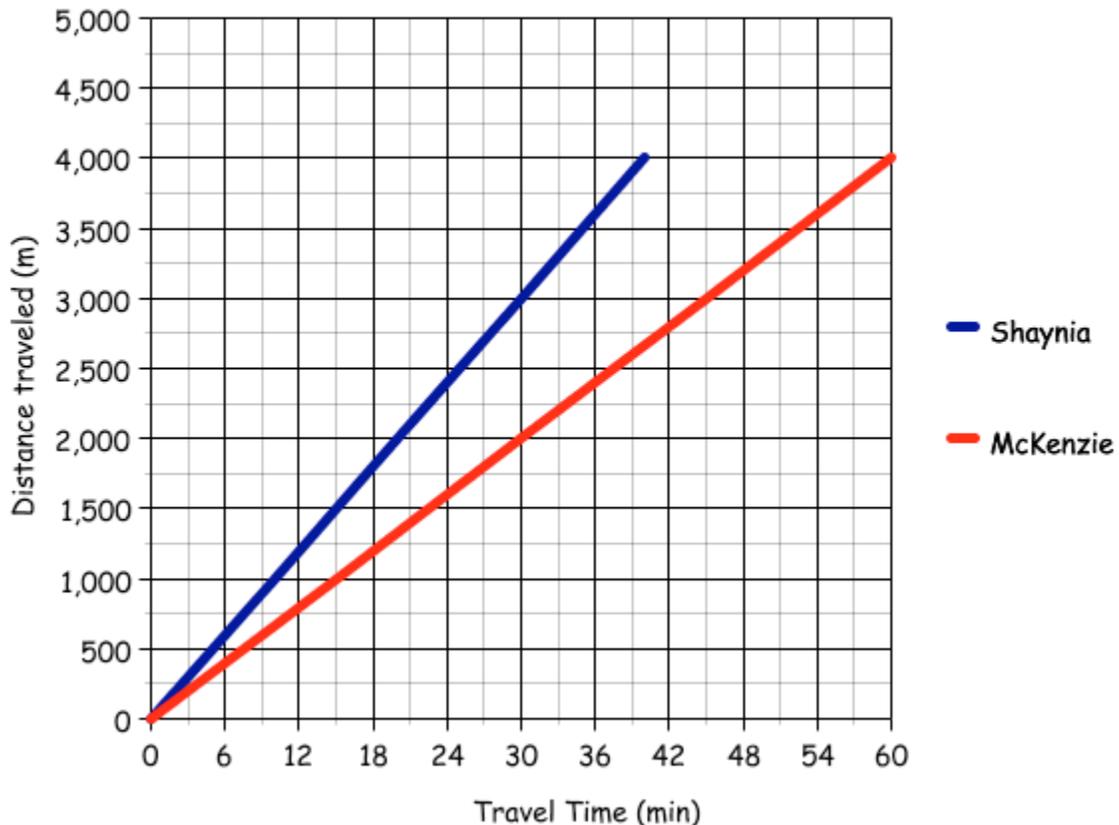
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The red and blue lines on the coordinate plane below show the distances that Shaynia and McKenzie walked over time. You and your partner each choose one of the lines.

- Work on your own. Choose at least three different travel times. For each time find the distance traveled. Record your results in the table below.

Time (min)	Distance (m)	Rate (m/min)
0	0	0meters/minute
0	0	0meters/minute
15	1500	100meters/minute
15	1000	66.7 meters/minute
30	3000	100meters/minute
30	2000	66.7meters/minute

Walking Distances



b. Compare your tables. Which person is walking at a faster rate?

- Similarities: Both Shaynia and McKenzie are walking at a constant speed
- Differences: Shaynia is walking at a faster speed than McKenzie. She is walking 100meters per minute whereas McKenzie is only walking 66.7 meters per minute

**Shaynia is walking at a faster speed

c. How do the graphs show who is walking at a faster rate?

Shaynia's line is steeper than McKenzie's line

d. Suppose another friend joins the conditioning group and has a faster walking rate than the rates you found. How would a line graph of this friend's distance walked over time compare with the graphs shown?

Their line would be steeper than Shaynia's (and McKenzie's) line

e. What other factors would affect the distance you can cover in a given amount of time?

- the terrain: if it was hilly vs. if it was flat
- rain vs a sunny day
- how fit the women are

f. How would the graph appear if the women stopped to get a drink of water at a nearby park?

The line for each person would be horizontal because they are not increasing their distance over time

g. How would the graph appear if their personal trainer had the women walk up hills?

The line for each person would not be as steep as it appears at this time