

# DETERMINING SPEED (VELOCITY)

Name \_\_\_\_\_

Speed is a measure of how fast an object is moving or traveling. Velocity is a measure of how fast an object is traveling in a certain direction. Both speed and velocity include the distance traveled compared to the amount of time taken to cover this distance.

$\text{speed} = \frac{\text{distance}}{\text{time}}$	$\text{velocity} = \frac{\text{distance}}{\text{time}} \text{ in a specific direction}$
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Answer the following questions.

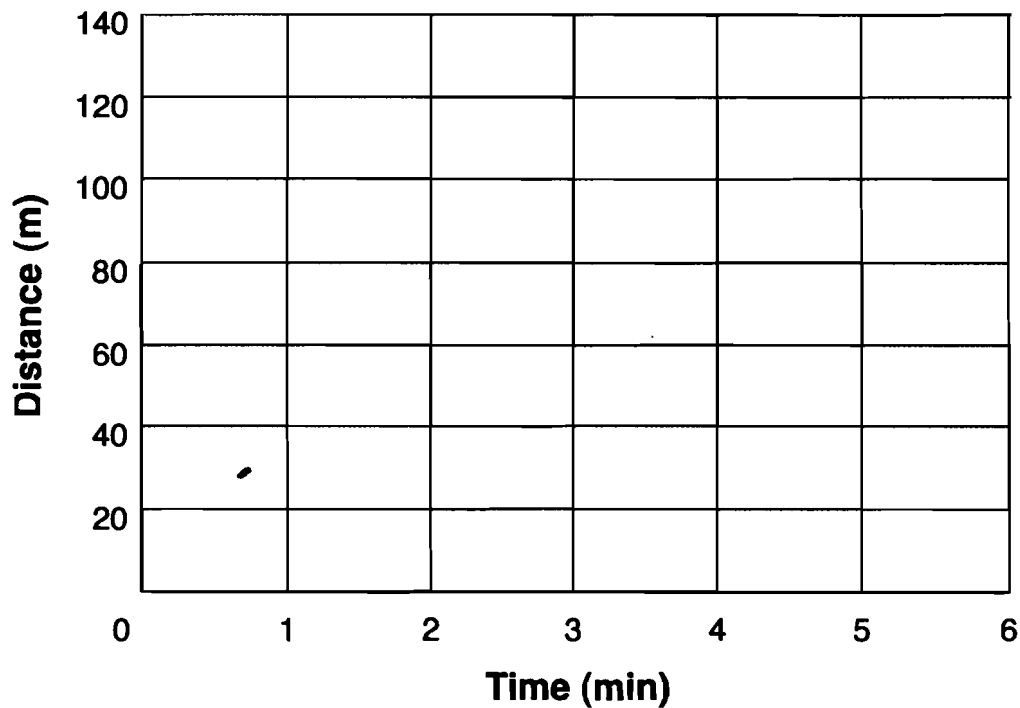
1. What is the velocity of a car that traveled a total of 75 kilometers north in 1.5 hours?  
\_\_\_\_\_
2. What is the velocity of a plane that traveled 3,000 miles from New York to California in 5.0 hours? \_\_\_\_\_
3. John took 45 minutes to bicycle to his grandmother's house, a total of four kilometers. What was his velocity in km/hr? \_\_\_\_\_
4. It took 3.5 hours for a train to travel the distance between two cities at a velocity of 120 miles/hr. How many miles lie between the two cities? \_\_\_\_\_
5. How long would it take for a car to travel a distance of 200 kilometers if it is traveling at a velocity of 55 km/hr? \_\_\_\_\_
6. A car is traveling at 100 km/hr. How many hours will it take to cover a distance of 750 km? \_\_\_\_\_
7. A plane traveled for about 2.5 hours at a velocity of 1200 km/hr. What distance did it travel? \_\_\_\_\_
8. A girl is pedaling her bicycle at a velocity of 0.10 km/min. How far will she travel in two hours? \_\_\_\_\_
9. An ant carries food at a speed of 1 cm/s. How long will it take the ant to carry a cookie crumb from the kitchen table to the ant hill, a distance of 50 m? Express your answer in seconds, minutes and hours. \_\_\_\_\_
10. The water in the Buffalo River flows at an average speed of 5 km/hr. If you and a friend decide to canoe down the river a distance of 16 kilometers, how many hours and minutes will it take? \_\_\_\_\_

# CALCULATING AVERAGE SPEED

Name \_\_\_\_\_

Graph the following data on the grid below and answer the questions at the bottom of the page.

<u>Time (min)</u>	<u>Distance (m)</u>
0	0
1	50
2	75
3	90
4	110
5	125



$$\text{Average Speed} = \frac{\text{Total Distance}}{\text{Total Time}}$$

1. What is the average speed after two minutes? \_\_\_\_\_
2. After three minutes? \_\_\_\_\_
3. After five minutes? \_\_\_\_\_
4. What is the average speed between two and four minutes? \_\_\_\_\_
5. What is the average speed between four and five minutes? \_\_\_\_\_