Name _____ Date _____

Determining Speed, Time, and Distance

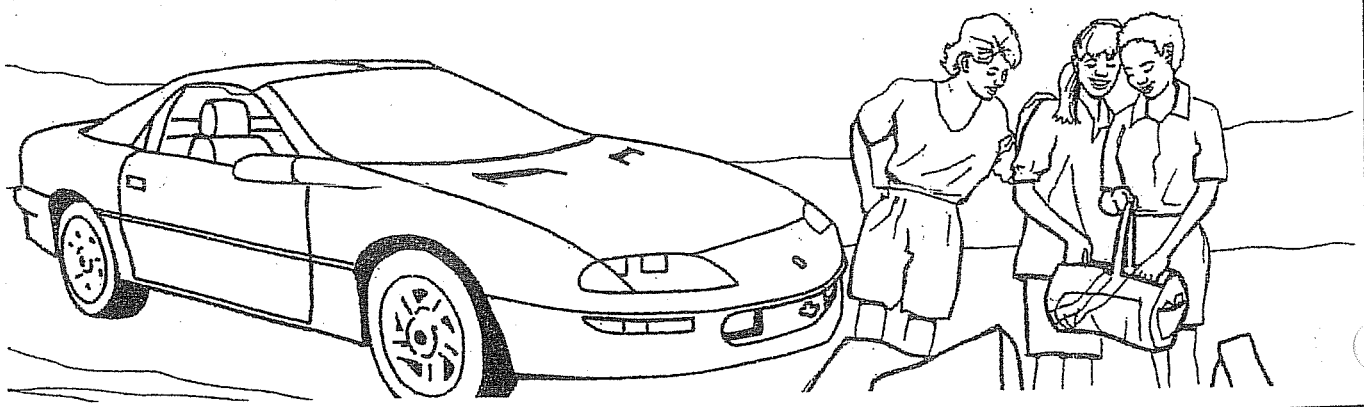
Speed, time, and distance are important in solving problems. If two of the three are known, the other can be found.

Examples:

1. To find speed, divide: Speed = Distance/Time	Speed = 200 miles/5 hrs.	40 mph = 200/5
2. To find distance, multiply: Distance = Speed*Time	Miles = 40 mph*5 hrs.	200 miles = 40*5
3. To find time, divide: Time = Distance/Speed	Time = 200 miles/40 mph	5 hours = 200/40

Solve the following. Fill in the blank or circle the correct answer.

1. Emily and her friends are traveling from Arizona to California. The distance is 400 miles. They intend to average 50 mph. Looking at speed, distance, and time, you know the (a) _____ and (b) _____. You do not know the (c) _____.
2. Which example from above will you use to solve Problem #1? (a) 1 (b) 2 (c) 3
3. The answer to #1 is _____.
4. Emily, Stephany, and Megan are traveling from California to Illinois. They intend to average 50 mph. They are told it will take them 40 hours at that speed. Looking at speed, distance, and time, you know the (a) _____ and (b) _____. You do not know the (c) _____.
5. Which example from above will you use to solve Problem #4? (a) 1 (b) 2 (c) 3
6. The answer to #4 is _____.
7. Emily and her friends are traveling from Illinois to Arizona. The distance is 1,800 miles. They intend to drive the distance in 30 hours. Looking at speed, distance, and time, you know the (a) _____ and (b) _____. You do not know the (c) _____.
8. Which example from above will you use to solve Problem #7? (a) 1 (b) 2 (c) 3
9. The answer to #7 is _____.



Name _____

Date_____ Per. ____

Speed/Velocity Calculations

The formula for speed:

The helpful 'triangle' looks like:

1. What is the speed of a truck which travels 10 km in 10 min at constant speed?

2. What is the speed of a bicycle that travels 100 m in 50 sec at constant speed?

3. What is the average speed of a commercial jet plane which travels from New York City to Los Angeles (4800 km) in 6 hours?

4. What is the average speed of an arrow which travels 1000 m in 5 seconds?

5. A car travels 120 km in 2 **hours**. What is its average speed in **km/min**.?

6. A car moves at a speed of 60 km per hour for 4 hours. How far will it travel?

7. How long will it take the car in problem 6 to move the same distance if its speed had been constant at 80 km per hour?

8. Philadelphia is 150 km south of New York City. With what constant speed would a plane have to fly to go from NYC to Philadelphia in 20 minutes?

9. A ball rolls at a steady speed of 15 m/sec for 5 sec. How far will it roll?

10. Sound travels at 100 ft/sec. How long should it take to hear an echo if the mountain is 4250 feet away?

Extra Credit

11. What distance would be covered in 10 min by a train that travels at a constant speed of 500 m in 10 seconds?

12. How long does it take light to travel 9.3×10^{7} miles from the sun to the earth if the speed of light is 1.86×10^{5} miles/sec?