Name_____
Period 1 2 3 4 5 6 7

Calculating speed and velocity

Velocity Problems

$$\text{speed (velocity)} = \frac{\text{distance}}{\text{time}}$$

1. Your family is taking a trip to the beach. The beach is 130 miles away. You need to be there in 3 hours. How fast does your mother need to drive?

2. You live 20 miles from school. You are on the school bus for 30 minutes. What is the average speed of your bus?

3. Your best friend lives 10 miles from you. It takes you 2 hours to ride your bike to her house. How fast are you riding?

4. A softball pitcher has the ability to throw a softball at a high speed to the catcher at home plate. The distance from the pitcher to the catcher is 40 feet. The ball travels the distance in 1.3 seconds. Calculate the speed of the ball.

5. Jane has a kitten named Fluff-ball. Fluff-ball usually sleeps in a cat bed 20 meters from the kitchen and hardly ever moves. But whenever Jane opens a can of cat food, the kitten comes running into the kitchen as fast as he can. If Fluff-ball takes 5 seconds to reach the kitchen, how fast can he run? Answer in meters per second.

6. NASCAR driver, Jeff Gordon, has a car that is one of the fastest on the circuit. If it travels 600 miles in 4 hours, what is his cruising speed?

7. The fastest car on Earth, a German-made *Thrust SSC*, would win every NASCAR race in America. If it takes 0.5 hours (30 minutes) to travel 380 miles, what is the speed?

8. The fastest train on Earth, the *TGV* from France, can travel at faster speeds than trains in the United States. During a speed test, the train traveled 800 miles in 2.4 hours. What is its speed?

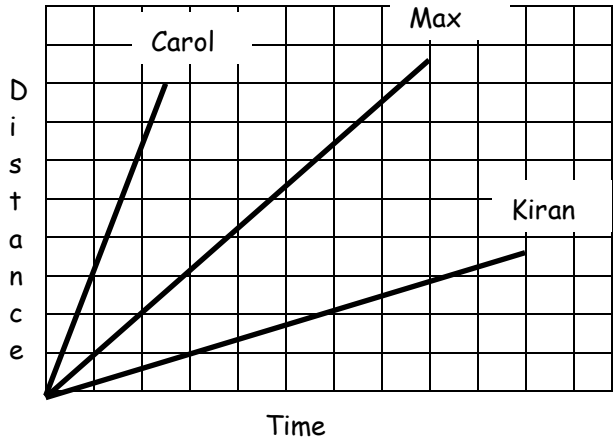
9. *Spirit of Australia,* a hydroplane boat, made speed records by traveling 239 miles in 0.75 hours (45 minutes). What is its record breaking speed?

10. In the equation velocity = distance/time, what happens to the value of the velocity when …

    a. The distance gets bigger?

    b. The time gets bigger?

Use the graph to answer the following questions.



11. These speed graphs show that one person is going faster than the other two.
    a. Who is going fastest?

    b. How do you know?