**Distance v Time Graph Notes Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* Interpreting distance vs. time graphs
  + Distance goes on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Time goes on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + A flat horizontal line indicates that the object or person is NOT moving
  + A diagonal line indicates that the object or person IS moving

Example #1: You’re at the park playing with your remote control helicopter and trying to land it on a picnic table. You descend the helicopter toward the table. During the descent you hover above the table while your friend clears off the food. When they are done you finish the descent. Explain what is occurring during each segment of the graph.

AB:

BC:

CD:

Example #2: You leave your house and walk 2 blocks in 3 minutes to the nearest gas station. You spend 5 minutes at the gas station before heading home. You walk 1 block in 1 minute before you stop at the crosswalk. You wait 1 minute before being able to cross the street and walk the remaining 1 block home. Explain what is occurring during each segment of the graph.

AB:

BC:

CD:

DE:

EF:

d

s t

**SPEED**

**Speed = Distance ÷ Time**

1. If a car travels 400m in 20 seconds how fast is it going?

**D = S = ( ) ÷ ( ) =**

**T =**

1. You arrive in my class 45 seconds after leaving math which is 90 meters away. How fast did you travel?
2. It takes Serina 0.25 hours to drive to school. Her route is 16 km long. What is Serina’s average speed on her drive to school?

**TIME**

1. How much time will it take for a bug to travel 5 meters across the floor if it is traveling at 1 m/s?
2. You need to get to class, 200 meters away, and you can only walk in the hallways at about 1.5 m/s. (if you run any faster, you’ll be caught for running). How much time will it take to get to your class?

**DISTANCE**

1. How far can you get away from your little brother with the squirt gun filled with paint if you can travel at 3 m/s and you have 15s before he sees you?
2. How far can your little brother get if he can travel at 2.5 m/s and in 5 seconds you will discover that his squirt gun has run out of paint?

**Average Speed = Total Distance ÷ Total Time**

**Calculations:**

A race car leaves the starting line and travels 36000 m in the first 600 seconds of the race. They are then forced to take a pit stop and don’t go anywhere for 250 seconds. After the pit stop, they finish the race, going 24500 m in 350 seconds.

a) What is the car’s average speed during the first part of the race (before the pit stop)?

b) What is the car’s average speed during the pit stop?

c) What is the car’s average speed after the pit stop?

d) What is the car’s average speed for the whole trip?