

Speed Lab

Name: _____

Date: _____

Period: _____

Pre Lab Questions:

1. How fast is your normal walking speed in meters per second?
2. How far can you walk in an hour, at your normal walking speed?
3. How many days would it take you to walk to the coast from here, assuming you could walk only eight (8) hours during the day?

Experiment Procedures:

Materials: Stop watch or watch with second hand, lab sheet, pen or pencil to write with.

Directions:

1. Complete the pre-lab questions and show your lab sheet to your teacher.
2. Get your lab supplies, and track assignment.
3. Have your partner time you, start to finish, as you walk the track one time.
4. Record your time for trial one, in the space provided on the data table.
5. Repeat steps 5 and 6 for trials two and three, record your data in the appropriate box on the data table.
6. Determine your Average Distance, Time and Speed.
7. Complete the lab sheet, front and back, and turn it in.

Data Table

	Distance	Time	Formula D / T	Speed
Example	50 feet	35 seconds	50 ft / 35 sec	1.43 ft/sec
Trial 1				
Trial 2				
Trial 3				
Average				

Average: 1. Add all the data for the given unit. 2. Divide by the number of instances added

Example: 1. Data for Time = 4.3 seconds, 2.2 seconds, and 3.4 seconds

$$4.3 + 2.2 + 3.4 = 9.9 \text{ seconds}$$

2. Number of instances = 3 (You added three separate numbers).

$$\text{Average} = 9.9 / 3 \text{ seconds}$$

My average walking speed is: _____ meters/second.

Convert your walking speed from meters per second into kilometers per hour by multiplying your individual walking speed above by the conversion factor of 3.6. (Average walking speed * 3.6 = km /h). Show you math.

My average walking speed is: _____ kilometers / hour

You now know how many kilometers you can travel at your individual walking speed in an hour. Where could you travel to from this school if you walked for eight (8) hours (in a straight line)? Using the map of Oregon below, determine where you could walk. Notice that the distance scale for this map is in the top right hand corner. Times your speed by 8 to find the overall miles you can travel.

In eight (8) hours I can walk _____ km. Using the scale provided on the map, draw a circle to show the distance you could travel in any direction in eight hours. List two places you could walk to in eight hours.

_____ (Place 1)

_____ (Place 2)

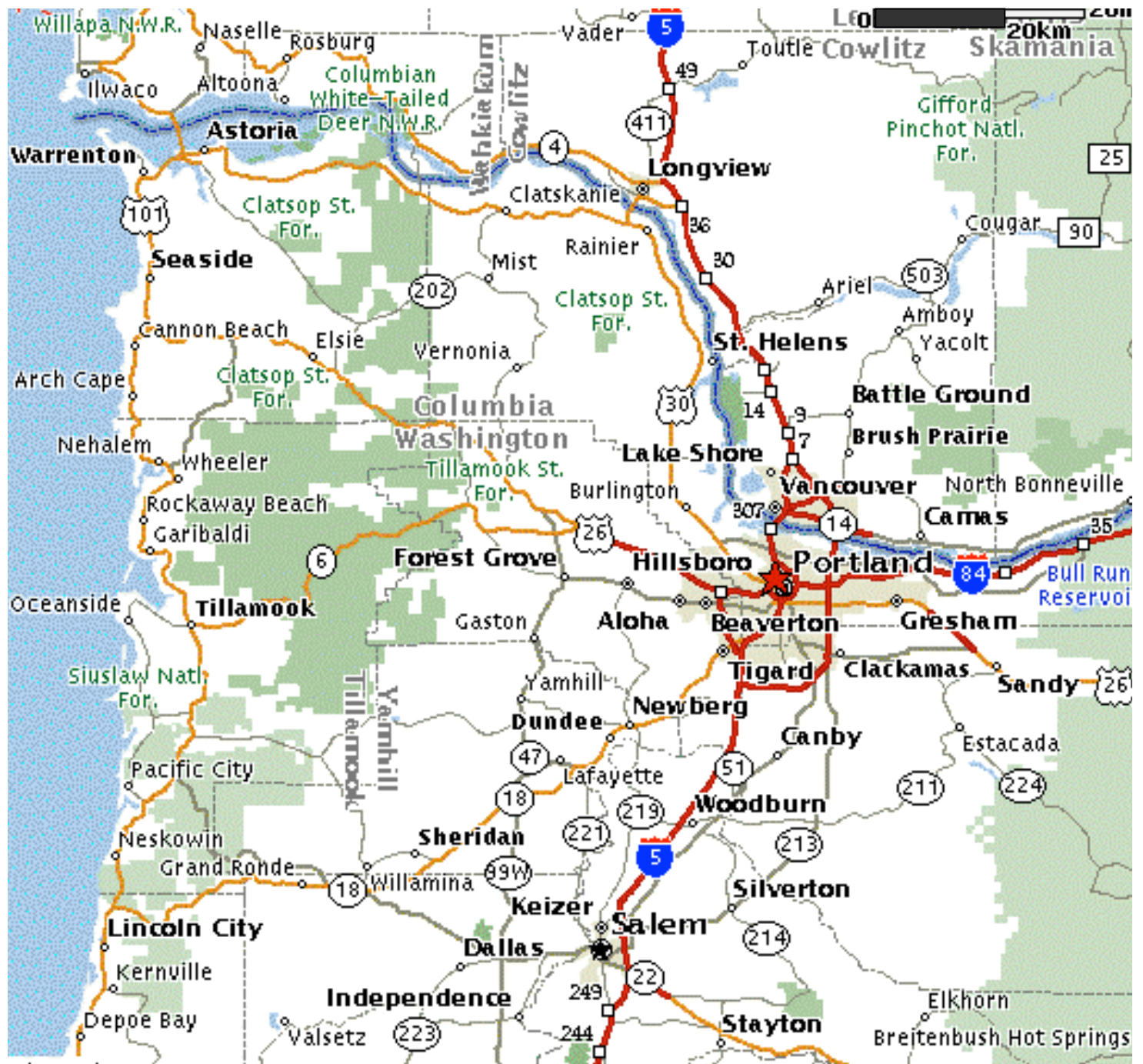
The last question on your Pre-lab was to estimate how long it would take you to walk to the coast from school, assuming you could walk eight hours a day. To do this, follow these steps.

1. What is the distance to the coast from here according to the map? _____ kilometers.
2. Divide the total kilometers to the coast by the number of kilometers you can travel in eight hours to determine how many days it would take you to walk to the coast. Fill in the blanks below:

I can travel _____ kilometers an hour, which means that in eight hours I can travel _____ km.

By dividing this into _____ kilometers, I can find that I can walk to the coast in _____ days.

Extra Credit: If you got a decimal answer for the number of days it takes to walk to the coast, determine the amount of hours the decimal represents in hours. _____



Show your work:

Trial 1:

Trial 2:

Trial 3:

Average:

Average walking speed (kilometers / hour):

Eight hour calculation:

Walking to the coast calculations: