**Motion Review Problem Set 1**

**Directions:** Please solve the following problems below. Remember to always setup your problem accordingly. First, write the formula. Second write out your known variables. Third, plug in the known variables into the formula. SHOW ALL WORK (adding, subtracting, dividing, etc.) The last step is writing your correct answer with the correct units. If you are handwriting your answers to turn in make sure you either circle or box your final answer.

**Speed and Velocity Practice:**

1. How many seconds will it take for a satellite to travel 450 km at a rate of 120 m/s?

2. What is the speed of a walking person in m/s if the person travels 1000 m in 20 minutes?

3. Pete is driving down 7th street. He drives 150 meters in 18 seconds. Assuming he does not speed up or slow down, what is his speed in meters per second?

4. A high speed train travels with an average speed of 227 km/h. The train travels for 2 h. How far does the train travel?

5. James rode his bike 0**.**65 hours and traveled 8**.**45 km. What was his speed in meters per second?

6. A dog travels 250 meters east in 8 seconds. What is the velocity of the dog?

7. The driver of a pickup truck drove north at a velocity of 75.0 km/min for 33 minutes. What distance did the bus travel in kilometers?

8. A storm is moving toward your house at a speed of 30 km/hr. It is now 70 km away from your house. In what time will the storm reach your house?

9. Bill and Amy want to ride their bikes from their neighborhood to school which is 14.4 kilometers away. It takes Amy 40 minutes to arrive at school. Bill arrives 10 minutes after Amy. How much faster (in meters/second) is Amy’s average speed for the entire trip?

10. The train traveled 500 kilometers north to Odessa in 2 hours. What is the train’s speed? What is it’s velocity?