Physics 2204
Assignment 1
Review of Distance/Displacement and Speed/Velocity
(Outcomes: 325-5)

Name:_____

1   Convert the following measurements as indicated. Show all workings. (Use Unit Analysis and round your answers to 3 significant digits)

    A   7.82 years to minutes   B   1560 s to hours

    C   17.5 hours to seconds   D   235 days to seconds

2   Convert the following speeds to m/s. Show all workings. (Use Unit Analysis and round your answers to 3 significant digits)

    A   47.6 km/h   B   75.4 km/h

3   Convert the following to km/h. Show all workings. (Use Unit Analysis and round your answers to 3 significant digits)

    A   27.6 m/s   B   18.5 m/s

4   A snowmobile rider travels 25.8 km in 44 minutes. What is the average speed in of the rider in km/h?

5   A "Yammy" moving at 90.0 km/h travels the length of the pond in 1.25 minutes. How long is the pond?

6   A snowmobile moving at 14.0 m/s travels from Trenton to Black Brook in 2.0 hours and 15 minutes. How far apart are the communities?

7   How long does it take a person to bike around a circular track, with a radius of 46.8 m, if the person rides at 2.6 m/s?

8   A plane, travelling non-stop, moves at a speed of 655 km/h in 2.0 hours and then 485 km/h for the remaining 5.0 hours. What is its average speed?

9   A jogger runs 4.0 km [W] in 0.50 h, then turns and runs 1.0 km [E] in 0.20 h, then 1.5 km [N] in 0.25 h, then 3.0 km [E] in 0.75 h, and finally 1.5 km [S] in 0.30 h.

        Find the jogger's average speed **and** average velocity.

10   A car us driven for 1.52 h with a velocity of 95 km/h [S], then for 3.50 h with a velocity of 65 km/h [N], and then finally 0.75 h with a velocity of 85 km/h [S].

        Find the average speed **and** the average velocity.

11   Steven drives 35.6 km [S] at a rate of 55.4 km/h [S] and then 57.5 km [N] at a rate of 62.6 km/h [N].

        Find Steven's average speed **and** velocity.