

Science 1206
In -class Assignment

Name: _____

Notes and textbook may be used, but students must work independently.

1. Convert each of the following to the unit indicated. Show your working.

A. 5.66 cm = _____ m D. 134 hm = _____ dm

B. 35 ms = _____ s E. 4.4 km = _____ mm

C. 0.25 L = _____ kL F. 0.028 Mg = _____ kg

2. Convert each to scientific notation with three significant digits.

A. 245 890 = _____ C. 0.0005499 = _____

B. 1202 = _____ D. 0.09802 = _____

3. Perform each of the following calculations and round the answers to the proper number of significant digits and with the proper unit. (Use scientific notation if necessary)

	Unrounded Answer	Final Answer
A. 3.56 g + 0.198 g + 42.5 g =		
B. 3.426 m x 0.239 m =		
C. 460 cm ² ÷ 2.3 cm =		
D. 10.0 m/s x 8.0 s =		
E. 4.28 g x 1000 mg/g =		

4. Perform the following calculations for uniform motion: Show all working and round answers to the proper number of significant digits.

A. If Sue runs 2.50 km in 1.35 h, what was her average speed?

B. A snail crawls across a table 77.8 cm wide in 2.60 min. Calculate its average speed in m/s.

C. How far will a rocket travel if it flies at 18 m/s for 12.5 s?

D. How long will it take a child to cross a playground 85 m wide if a she is walking at an average speed of 2.5 m/s?

E. How far will a motorcycle travel if it moves at an average speed of 110 km/h for 45 min.?

5. A hiker and a cyclist start at the same time from the same location and travel in the same direction. The table below shows the distance-time graph for the first 1.5 hours of their motion.

Time (h)	Distance of Hiker (km)	Distance of Cyclist (km)
0.00	0.00	0.00
0.25	0.95	2.85
0.50	1.90	5.70
0.75	2.85	8.55
1.00	3.80	11.40
1.25	4.75	14.25
1.50	5.70	17.10

A. Using the graph paper provided, plot the graph of this data, including two lines: one for the hiker and one for the cyclist.

B. From the graph, determine how long it took each person to travel 5.0 km.

Time for Hiker = _____ Time for cyclist = _____

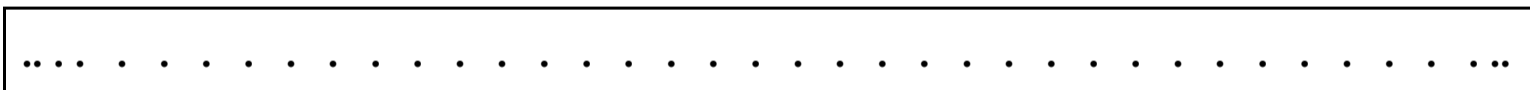
C. Calculate the average speed for each person. Show your working on the graph sheet.
(Remember - the average speed is the slope of the distance-time graph)

6. The ticker tape below is a record of the motion of a toy car. Every 6 dots represents 0.10 s.

A. Complete the data table below by marking off and measuring the tape as you did in the lab.

B. Plot the graph of this data. Use a line of best fit.

C. Determine the average speed of the toy car by finding the slope of your graph. Show which points you are using and show your calculations on the graph sheet below.



Time (s)	Distance (cm)
0.00	
0.10	
0.20	
0.30	
0.40	
0.50	

