

Chem 1315 Section 1
InClass Exercise 1.2
Fall 2003

Name _____ Lab Section # _____
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Due at the end of class.



- ICE2.1. On a recent trip to Kansas City on the Kansas State Turnpike I noticed the mileage of 101.632 (miles) printed on the south (maybe the west) side of an overpass bridge crossing on the turnpike (I drove underneath the overpass). On the return trip on the same route I noticed the same distance printed on the opposite side of the overpass bridge. Assuming the Kansas Department of Transportation (KDOT) uses a global position system device accurate to within ± 1.5 meters;
- Express the error in measuring accuracy of the GPS device used by KDOT in + or - terms in units of feet (show your work).
 - Express the error in measuring accuracy of the PS device used by KDOT in + or - terms in units of miles (show your work).
- a) Is the mileage number written on the bridge overpass reported to a reasonable number of significant figures? Explain.

- b) The mileage number reported on both sides of the overpass is the same.
- i) Estimate the width of a bridge for a typical two-lane road. Briefly, describe how you arrived at your estimated width.

 - ii) Considering the width of the overpass, is it reasonable to report the distance as the same number (101.632 miles) on opposite sides of the overpass. Explain.

 - iii) Would it be reasonable to use the number 101 miles as the distance measure on opposite sides of the overpass? Explain.

 - iv) What number should be reported if the same number is to be printed on both sides of the overpass? Explain.