Quiz 5 for Statistics 301
Elementary Statistical Methods - Fall 1999
Material Covered: Chapter 8 of Workbook and text
For: 5th November

Name (please print): _____.
last first

Octane ratings from a supplier's pipeline were sampled on 12 consecutive days. Assume the octane ratings follow a normal distribution.

88.6, 86.6, 89.6, 87.6, 88.3, 88.8,
88.9, 87.4, 87.9, 88.0, 88.2, 88.5,

1. Match the statistical terms with the various items in this example.

terms	octane ratings example
(a) population	**(a)** 12 octane ratings
(b) sample	**(b)** all octane ratings
(c) statistic	**(c)** average octane ratings over 12 days
(d) parameter	**(d)** average octane ratings over all days students, X

terms	(a)	(b)	(c)	(d)
octane ratings example				

2. [1] The 95% confidence interval for the

average octane rating is _____.

3. [2] If a second independent sample of 15 octane ratings gave $\bar{x}_2 = 88.5$, $s_2 = 0.43$, then the 95% confidence interval for the difference in the average octane ratings for the two samples (do *not* pool)

is _____.

4. [1] The percentage of octane ratings between

88.0 and 88.9 (including both 88.0 and 88.9) is _____.

5. [1] The 95% confidence interval for the

percentage of octane ratings between 88.0 and 88.9 is _____.

1. Match

terms	(a)	(b)	(c)	(d)
PU/NC example	(b)	(a)	(c)	(d)

2. [1] (87.702, 88.698) (t–interval)

3. [2] (-0.8316, 0.23155) $\bar{x}_1 = 88.2$, $s_1 = 0.78$, $n_1 = 12$ and $\bar{x}_2 = 88.5$, $s_2 = 0.43$, $n_2 = 15$ (two sample t interval; no pool)

4. [1] $\frac{7}{12} \approx 0.58$

5. [1] (0.30439, 0.86227)