Quiz 7 (Individual) for Statistics 113
Statistics and Society–Fall 1999
Material Covered: Chapters 26,27 of notes and text
For: 1st December

Name (please print): _____.
last first

A college physics manual gives an average energy value for span gas of 95 units. A college physics club claims the average energy value is higher than 95 units. Suppose a sample of 11 sealed glass tubes of span gas provides a sample average of 97 units and a sample SD of 2.38 units.

1. [1] Match the statistical terms with the span gas example.

terms	span gas example
(a) population	(a) energy values for 11 tubes of gas
(b) sample	(b) average energy for all tubes of gas
(c) statistic	(c) energy values for all tubes of gas
(d) parameter	(d) average energy for 11 tubes of gas

terms	(a)	(b)	(c)	(d)
span gas				

2. [1] If the errors follow a normal curve, then it is appropriate to use a t curve in this case since the sample size is small. For example, the area under the t curve, with 6 degrees of freedom, to the right of 1.52 is (circle one)

   (a) less than 0.5%.

   (b) between 0.5% and 1%.

   (c) between 1% and 2.5%.

   (d) between 1% and 5%.

   (e) between 5% and 10%.

3. [1] The corrected sample SD (SD^+) is (circle closest one) **2.27** / **2.38** / **2.50** / **2.65** / **2.78**.

4. [1] The value of the observed t–test statistic, t, is (circle one) **1.76** / **1.94** / **2.19** / **2.38** / **2.65**.

5. [1] The p–value is $P =$ _____.

6. [1] The data (circle one) **does** / **does not** support the claim made by the physics college club.

1. [1]

terms	(a)	(b)	(c)	(d)
span gas	(c)	(a)	(d)	(b)

2. [1] (e)
3. [1] **2.50**
4. [1] **2.65**
5. [1] between 1% and 2.5%
6. [1] **does**