

Question 33

The data below show measurements on two (non-matched) samples of patients in a clinical trial to compare two drugs, A and B . Conduct a t -test to establish whether there is evidence that the drugs produce different mean effects.

A :	3.2	0.7	1.0	2.3	2.4
B :	1.4	2.6	5.4	4.5	1.7

The sample means are $\bar{x}_A = 1.92$, $\bar{x}_B = 3.12$ and the pooled sample variance is $s_p^2 = 2.09$.

$$T = \frac{3.12 - 1.92}{2.09 \sqrt{5 \cdot 1/5}} = 0.908$$

[4]

Question 34

Histograms showed that each of two small samples of positive values had long tails to the right.

- Why would this cast doubts on the wisdom of using a t -test to compare the means of the populations from which the samples arose? *not normal*
- Give two transformations which might legitimize the t -test. *log, root*
- If one did not want to transform the data, what test might one apply? *Mann-Whitney*

[3]