## HMWK 4

- 1 (a) At the 95% level, 95% of the calculated confidence intervals fall between -0.288 and -0.524.
  - (b) (-0.524, -0.288)
- \*2 (a) The data appears to fall under a normal distribution.
  - (b) upper bound = -26.9 and lower bound = -50.3
  - \*(c) A 95% upper bound would be the 95% of the confidence intervals computed at the 95% confidence level contain the proposed mean.
  - (d) Pairing when the average difference = 0 does not make any sense because then the age at onset and the age at diagnosis would be the same.
  - (e) The above is outside of the bounds, so we reject the null that the average diagnosis occurs more than 25 months after the onset of symptoms.

3

- 4 (a) Both the energizer and ultracell data has been observed to be normal.
  - (b) Reject the null that the variances do not differ.
  - (c) I would not pay the extra money because the variance of the energizer batteries is too high.