



EB 3125 STATISTICS – QUIZ 2

Instruction: Answer All Questions.

- a. A population consist of the following four values:

25	50	80	90
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- i. What is the population mean? (1 MARK)

- ii. Determine the sampling distribution of the mean for random samples of size two and calculate the mean of the sampling distribution. (4 MARKS)

- b. For a random sample of 60 overweight men, the mean of the number of pounds that they were overweight was 30. The standard deviation of the population is 4.2 pounds.
[Hint: $\bar{X} \pm Z_{\alpha/2} \left(\frac{\sigma}{\sqrt{n}} \right)$]

- i. Find the best point estimate of the average number of excess pounds that they weighed. (1 MARK)

- iii. Find the 99% confidence interval of these pounds. (4 MARKS)

Formulae

$\bar{x} = \frac{\sum fx_m}{\sum f}$ $MD = L + \frac{\left(\frac{n}{2} - C_f \right)}{f} C$	<p>Sample Variance ,</p> $s^2 = \frac{\sum fx^2 - \frac{(\sum fx)^2}{\sum f}}{\sum f - 1}$ <p>Standard deviation, $s = \sqrt{s^2}$</p>
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