

MATH10282: INTRODUCTION TO STATISTICS
SEMESTER 2
QUIZ PROBLEM 2
(Deadline: Friday 25 February 2022, 11:00am)

Suppose that X_1, \dots, X_n is a random sample from a distribution specified by the probability density function

$$f_X(x) = 0.5 \exp(-|x|)$$

for $-\infty < x < \infty$. What are the mean and variance of the sampling distribution of the sample mean, \bar{X} ?

- a) mean = 0, variance = $\frac{1}{n}$.
- b) mean = 0, variance = $\frac{2}{n}$.
- c) mean = 0, variance = $\frac{3}{n}$.
- d) mean = 0, variance = $\frac{4}{n}$.

This problem is worth 1 mark. Marking scheme: 1 mark if the answer is correct, 0 mark if the answer is incorrect.

Please use Blackboard to enter your answer.