

Name:

ID #:

Section 1

Serial #:

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At a certain industrial process of producing a fabric cloth, it was found that flaws appear at a rate of 5 per 50 meters.

a. In a randomly selected long piece of cloth, what is the average distance (in meters) between any two successive flaws? Justify.

b. If a sample of 49 randomly selected long pieces, what is the probability that the total distance between any two successive flaws will exceed 500 meters? Justify.

c. Assume that the distances are normally distributed. If a sample of 16 randomly selected long pieces has a standard deviation of 3 meters, what is the probability distribution for the average distance between any two successive flaws? Justify.

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*With My Best Wishes*