

TOPIC

Engineering Probability and Statistics – Section II – Question 9

QUESTION

Two types of plastic are suitable for use in an electronics component manufacturer. The breaking strength of this plastic is important. It is known that $\sigma_1 = 2$ psi and $\sigma_2 = 3$ psi. For a random sample of size $n_1 = 10$ and $n_2 = 13$, we obtain $\bar{x}_1 = 156$ psi, and $\bar{x}_2 = 163$ psi. The company will not adopt plastic 2 unless $\mu_2 - \mu_1 > 5$ psi. Consider the hypothesis test $H_0: \mu_2 - \mu_1 = 5$ versus $H_1: \mu_2 - \mu_1 > 5$. The P-value of this test most nearly is

- (A) 0.010
- (B) 0.028
- (C) 0.053
- (D) 0.086

CONTRIBUTOR

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