

**TOPIC**

Engineering Probability and Statistics – Section II – Question 8

**QUESTION**

The sodium content of a 300-gram box of organic corn flakes is approximately normally distributed with  $\sigma = 0.55$  milligrams. Ten boxes were examined. The data (in milligrams) are as follows: 131.4, 130.9, 130.0, 129.8, 129.5, 129.4, 130.1, 130.6, 130.5, and 129.8. Test the hypothesis  $H_0: \mu = 130$  versus  $H_1: \mu \neq 130$ , using  $\alpha = 0.02$ . If the true mean sodium content is 130.5 milligrams, the power of this test most nearly is

- (A) 0.050
- (B) 0.121
- (C) 0.216
- (D) 0.293

**CONTRIBUTOR**

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