

**Question #8259** 1. You read that a statistical test at the  $\alpha = 0.01$  level has probability 0.18 of making a Type II error when a specific alternative is true. What is the power of the test against this alternative? 2. You read that a statistical test at the  $\alpha = 0.01$  level has probability 0.14 of making a Type II error when a specific alternative is true. What is the power of the test against this alternative?

**Solution.** The power of the test equals  $1 - P(\text{Type II error}) = 1 - 0.18 = 0.82$  in the first case and  $1 - 0.14 = 0.86$  in the second.

**Answer.** 1) 0.82, 2) 0.86.