

11-10 Standardized Test Prep

Normal Distributions

Multiple Choice

For Exercises 1–5, choose the correct letter.

1. The mean number of pairs of shoes sold daily by a shoe store is 36, with a standard deviation of 3. On what percent of days would you expect the store to sell from 33 to 42 pairs of shoes?

(A) 13.5% (B) 50% (C) 68% (D) 81.5%

2. What is the standard deviation for the normal distribution shown at the right?



(F) 60 (H) 120
(G) 360 (I) 676

3. A normal distribution has a mean of 700 and a standard deviation of 35. What is the probability that a value selected at random is at most 630?

(A) 0.0235 (B) 0.025 (C) 0.700 (D) 0.975

4. Scores on an exam are distributed normally with a mean of 76 and a standard deviation of 10. Out of 230 tests, about how many students score above 96?

(F) 2 (G) 3 (H) 6 (I) 8

5. A hardware store sells bags of mixed nails. The number of nails of a given length is distributed normally with a mean length of 5 in. and a standard deviation of 0.03 in. About how many nails in a bag of 120 are between 4.97 in. and 5.03 in. long?

(A) 34 (B) 41 (C) 68 (D) 82

Short Response

6. The heights of the girls in a school choir are distributed normally, with a mean of 64 and a standard deviation of 1.75. If 38 girls are between 60.5 in. and 67.5 in. tall, how many girls are in the choir? Show your work.