

AP Stats

Ch. 5 Practice

Name _____ Pd _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find the percent of a standard Normal model found in the given region. Round to the nearest hundredth of a percent

1. $z < 1.13$ 1. _____

- A) 87.08% B) 89.07% C) 88.09% D) 12.92% E) 84.85%

2. $-0.55 < z < 0.55$ 2. _____

- A) 41.76% B) 90.00% C) -41.76% D) 43.57% E) -90.00%

3. $z > -1.82$ 3. _____

- A) 3.44% B) 92.57% C) 46.56% D) 96.56% E) -3.44%

4. $-0.73 < z < 2.27$ 4. _____

- A) 22.11% B) 154.00% C) 76.47% D) 48.84% E) 75.57%

In a standard Normal model, state what value(s) of z cuts off the described region.

5. the lowest 9% 5. _____

- A) -1.34 B) -1.39 C) 1.34 D) -1.26 E) -1.45

6. the highest 7% 6. _____

- A) 1.48 B) 1.26 C) 1.45 D) 1.39 E) -1.48

7. the middle 87.4% 7. _____

- A) -1.53 to 1.53
B) -1.46 to 1.46
C) -1.45 to 1.45
D) -1.39 to 1.39
E) -1.00 to 1.00

8. the middle 96% 8. _____

- A) -2.05 to 2.05
B) -2.33 to 2.33
C) -3.00 to 3.00
D) -1.75 to 1.75
E) 0 to 2.05

Solve the problem. Round to the nearest tenth.

9. For a recent English exam, use the Normal model $N(73, 9.2)$ to find the score that represents the 90th percentile. 9. _____
- A) 61.2 B) 82.2 C) 81.3 D) 84.8 E) 63.8
10. Based on the Normal model for snowfall in a certain town $N(57, 8)$, how many inches of snow would represent the 25th percentile? 10. _____
- A) 51.6 inches
B) 65 inches
C) 14.3 inches
D) 49 inches
E) 62.4 inches
11. Based on the Normal model for car speeds on an old town highway $N(77, 9.1)$, what is the cutoff value for the highest 15% of the speeds? 11. _____
- A) about 65.5 mph
B) about 63.1 mph
C) about 67.5 mph
D) about 11.6 mph
E) about 86.5 mph
12. Based on the Normal model for car speeds on an old town highway $N(77, 9.1)$, what are the cutoff values for the middle 20% of the speeds? 12. _____
- A) about 84.7 mph, about 69.3 mph
B) about 86.1 mph, about 67.9 mph
C) about 74.7 mph, about 79.3 mph
D) about 61.6 mph, about 92.4 mph
E) about 95.2 mph, about 58.8 mph

Solve the problem. Round to the nearest hundredth.

13. After increased patrol, cars on an old town highway travel at speeds averaging 53 mph. If 93% of vehicles travel below 68 mph, what approximate standard deviation could represent this model (assuming a Normal model is appropriate)?
- A) 10.14 B) 31.76 C) 49.29 D) 63.24 E) -10.14

14. After increased patrol, 33% of vehicles on an old town highway travel below 45 mph with a standard deviation of 5.8. Assuming a Normal model is appropriate, find the mean speed. 14. _____
- A) 14.85 mph
B) -42.45 mph
C) 47.55 mph
D) 50.8 mph
E) 1.91 mph
15. On a recent English exam, scores averaged 76 points. If 2% of scores fell above 95 points, find an approximate standard deviation (assuming the Normal model is appropriate). 15. _____
- A) -9.22 B) 9.22 C) 1.9 D) 83.01 E) 1.52
16. On a recent English exam, if 20% of scores fell below 60 points and the standard deviation is 6.0, find the mean score (assuming the Normal model is appropriate). 16. _____
- A) 65.04 B) -54.96 C) 1.20 D) 12 E) 66

Solve the problem.

17. The volumes of soda in quart soda bottles can be described by a Normal model with a mean of 32.3 oz and a standard deviation of 1.2 oz. What percentage of bottles can we expect to have a volume less than 32 oz? 17. _____
- A) 59.87% B) 40.13% C) 9.87% D) 38.21% E) 47.15%

Answer Key

Testname: ZONK QUESTIONS

1. A
2. A
3. D
4. E
5. A
6. A
7. A
8. A
9. D
10. A
11. E
12. C
13. A
14. C
15. B
16. A
17. B