

Stats Test - 3**Your score: 80% (8 points out of 10)****Question #1 (1 point)**

A set of test scores are normally distributed. Their mean is 100 and standard deviation is 20. These scores are converted to standard normal z scores. What would be the mean and median of this distribution?

Your answer:0  **Correct****Question #2 (1 point)**

A student received a standardized (z) score on a test that was -. 57. What does this score tell about how this student scored in relation to the rest of the class? [Hint: Use Z table]

Your answer:The student has scored 72% less than the rest  **Correct****Question #3 (1 point)**

Suppose that combined verbal and math SAT scores follow a normal distribution with mean 896 and standard deviation 174. Suppose further that Peter finds out that he scored in the top 3% of SAT scores. Determine how high Peter's score must have been.

Your answer:1244  **Incorrect****Correct answer:**

1418

Question #4 (1 point)

Heights of adult women in the United States are normally distributed with a population mean of $\mu = 63.5$ inches and a population standard deviation of $\sigma = 2.5$. A medical re- searcher is planning to select a large random sample of

adult women to participate in a future study. What is the standard value, or z-value, for an adult woman who has a height of 68.5 inches?

Your answer:

2 ✓ **Correct**

Question #5 (1 point)

An automobile manufacturer introduces a new model that averages 27 miles per gallon in the city. A person who plans to purchase one of these new cars wrote the manufacturer for the details of the tests, and found out that the standard deviation is 3 miles per gallon. Assume that in-city mileage is approximately normally distributed.

What is the probability that the person will purchase a car that averages less than 20 miles per gallon for in-city driving?

Your answer:

2 ✓ **Correct**

Question #6 (1 point)

From Question 5,

What is the probability that the person will purchase a car that averages between 25 and 29 miles per gallon for in-city driving?

Your answer:

0.5 ✓ **Correct**

Question #7 (1 point)

A Z-score represents the number of standard deviations above or below the mean.

Your answer:

True ✓ **Correct**

Question #8 (1 point)

The percentile rank for the mean is 50% for any normal distribution.

Your answer:

True ✓ **Correct**

Question #9 (1 point)

A fair coin is flipped 9 times. What is the probability of getting exactly 6 heads?

Your answer:

0.16 ✓ **Correct**

Question #10 (1 point)

You are more likely to get a pattern of HTHHHTHTTH than HHHHHHHHTT when you flip a coin 10 times

Your answer:

False ✗ **Incorrect**

Correct answer:

True