

1. A random sample of scores on a difficult exam yields: 19, 24, 24, 24, 30, 30, 32, 32, 32, 112.

Which measure is the best representative of center, and what is its value?

- A) median = 30 B) mode = 32 C) mean = 35.9 D) sample size = 10 E) None of these

2.

		High school graduate		
		Yes	No	Total
Felony Record	Yes	39	317	356
	No	3425	1219	4644
Total		3464	1536	5000

What is the conditional probability that a randomly chosen individual has a felony record, given that they are a high school graduate? (round to 4-decimals)

- A) 0.0110 B) 0.1230 C) 0.1096 D) 0.0113 E) 0.2064

3. The grades on this midterm are normally distributed with a mean of 70 and a standard deviation of 10. The top 10% of the scores are graded "A." What is the minimum score graded A?

(round to whole number)

- A) 90 B) 87 C) 86 D) 83 E) None of these

4. A researcher wants to estimate the mean cholesterol level of people in Miami. A random sample of 21 people yields a mean cholesterol level of 224, with a standard deviation of 12. At a 95% confidence level. What is the appropriate confidence interval for the true average cholesterol level?

- A) (218.538, 229.462) B) (223.014, 224.986) C) (219.693, 228.307)
D) (214.967, 233.033) E) (219.598, 228.402)

5. The reasonable and customary fee for a certain medical procedure is \$1200. The insurer claims that the average fee charged by clinics in this area is higher than \$1200. A simple random sample of 15 clinics produces a mean of \$1500 with a standard deviation of \$200. Assume that the charges follow a normal distribution. At $\alpha = 0.05$, test the insurer's claim. Estimate the p-value.

- A) less than 0.001
B) between 0.01 and 0.025
C) between 0.005 and 0.01
D) between 0.025 and 0.05
E) between 0.001 and 0.005

6. A realtor claims that homes in a nearby college town have a mean value of \$88,950. A random sample of 12 homes has a mean of \$90,400 and a standard deviation of \$4,200. Your conclusion if the significance level is 0.01:

- A) There is sufficient evidence to support the realtor's claim.
B) There is insufficient evidence to support the realtor's claim.

- C) There is sufficient evidence to reject the realtor's claim.
- D) There is insufficient evidence to reject the realtor's claim.
- E) None of the above