Quiz 2

Quiz, 8 questions

1 point

1.
What is the variance of the distribution of the average an IID draw of n observations from a population with mean μ and variance σ^2.

- σ^2
- $\frac{\sigma^2}{n}$
- σ/n
- $2\sigma/\sqrt{n}$

---

1 point

2.
Suppose that diastolic blood pressures (DBPs) for men aged 35-44 are normally distributed with a mean of 80 (mm Hg) and a standard deviation of 10. About what is the probability that a random 35-44 year old has a DBP less than 70?

- 16%
- 32%
- 8%
- 22%

---

1 point

3.

Brain volume for adult women is normally distributed with a mean of about 1,100 cc for women with a standard deviation of 75 cc. What brain volume represents the 95th percentile?

- approximately 1223
- approximately 977
- approximately 1247
- approximately 1175

1 point

4.

Refer to the previous question. Brain volume for adult women is about 1,100 cc for women with a standard deviation of 75 cc. Consider the sample mean of 100 random adult women from this population. What is the 95th percentile of the distribution of that sample mean?

- approximately 1110 cc
- approximately 1088 cc
- approximately 1112 cc
- approximately 1115 cc

1 point

5.

You flip a fair coin 5 times, about what's the probability of getting 4 or 5 heads?

- 3%
- 6%
- 19%
- 12%

1 point

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6.

The respiratory disturbance index (RDI), a measure of sleep disturbance, for a specific population has a mean of 15 (sleep events per hour) and a standard deviation of 10. They are not normally distributed. Give your best estimate of the probability that a sample mean RDI of 100 people is between 14 and 16 events per hour?

- 34%
- 95%
- 47.5%
- 68%

---

1 point

7.

Consider a standard uniform density. The mean for this density is .5 and the variance is 1 / 12. You sample 1,000 observations from this distribution and take the sample mean, what value would you expect it to be near?

- 0.75
- 0.25
- 0.10
- 0.5

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1 point

8.

The number of people showing up at a bus stop is assumed to be

Poisson with a mean of 5 people per hour. You watch the bus

stop for 3 hours. About what's the probability of viewing 10 or fewer people?

0.12

0.06

0.03

0.08

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