

PSTAT 5A: MT2 Practice Multiple Choice Questions

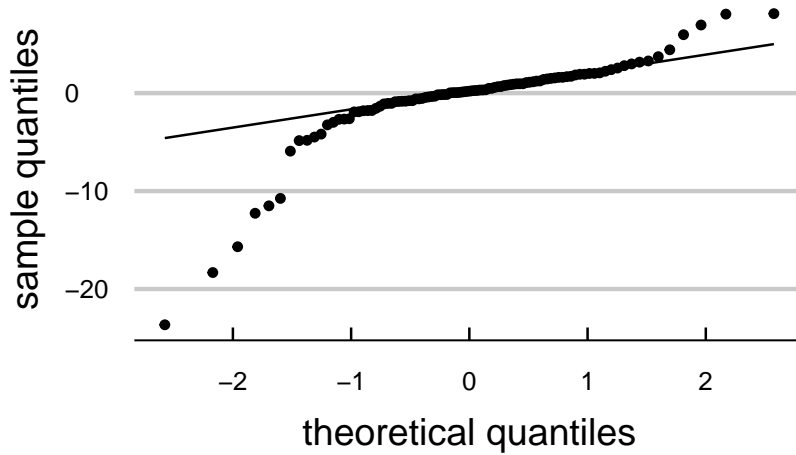
1. What is the expected number of heads in 10 independent tosses of a fair coin?
 - 0.0000
 - 1.0000
 - 1.5492
 - 5.0000
 - None of the above.

2. What is the correct syntax to import the `scipy.stats` module with the nickname `sps`?
 - `import scipy.stats as sps`
 - `import scipy.stats with name sps`
 - `import .scipy.stats.sps`
 - `import scipy.stats with nickname sps`

3. The weights of adult male chickens is normally distributed with mean 5.7 lbs and standard deviation 1.2 lbs. What is the probability that a randomly selected chicken will have weight exactly equal to 6.1 lbs?
 - 0.0000
 - 0.0714
 - 0.2666
 - 0.3145
 - None of the above.

4. Which of the following correctly computes the critical value in a hypothesis test with an $\alpha = 0.05$ level of significance? Assume the test statistic is normally distributed under the null, and assume all necessary modules have been imported and that no modules have been imported with a nickname.
 - `scipy.stats.norm.ppf(0.025)`
 - `-scipy.stats.norm.ppf(0.025)`
 - `numpy.stats.norm.ppf(0.025)`
 - `-numpy.stats.norm.ppf(0.025)`
 - None of the above.

5. The QQ-plot of a variable called x is displayed below:



Which of the following statements is the correct interpretation of this QQ-plot?

- The plot indicates normality in x because there are significant deviations from linearity in the tails of the plot.
- The plot indicates non-normality in x because there are significant deviations from linearity in the tails of the plot.**

6. Do higher confidence levels lead to wider or narrower confidence intervals?

- Wider**
- Narrower

7. Which of the following is **not** one of the Binomial Conditions?

- Independence across trials
- Fixed number of trials
- $n(1 - p) \geq 10$
- Well-defined notion of “success” and “failure”
- None of the above

8. What is the 90th percentile of the t_{20} distribution?

- 1.33**
- 1.72
- 2.09
- 2.53
- 2.85