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1. A data team at a household goods retailer is asked to predict the success of an upcoming sale on patio furniture. To make an informed prediction, they use statistics to analyze data on past patio furniture sales. What type of probability are they using? 1 / 1 point

- ○ Dependent
- ◉ Objective
- ○ Subjective
- ○ Independent

✓ Correct

2. The probability of an event is close to 1. Which of the following statements best describes the likelihood that the event will occur? 1 / 1 point

- ○ The event is unlikely to occur.
- ○ The event is certain not to occur.
- ◉ The event is likely to occur.
- ○ The event is certain to occur.

✓ Correct

3. A coin is tossed twice. To calculate the probability of getting two heads in a row, which of the following equations should be used? 1 / 1 point

- ○ ½ ÷ ½
- ○ ½ + ½
- ○ ½ - ½
- ◉ ½ * ½

✓ Correct

4. Fill in the blank: Two events are _____ if the occurrence of one event does not change the probability of the other event. 1 / 1 point

- ○ dependent
- ○ discrete

- ○ continuous
- ◉ independent

✓ Correct

5. What concept refers to the probability of an event before new data is collected? 1 / 1 point

- ◉ Prior probability
- ○ Subjective probability
- ○ Conditional probability
- ○ Posterior probability

✓ Correct

6. Which of the following are examples of discrete random variables? Select all that apply. 1 / 1 point

- ☑ The number of radios produced in a factory each day

✓ Correct

- ☐ The length of an airplane
- ☑ The number of rooms in a hotel

✓ Correct

- ☐ The time it takes to drive from one city to another city

7. Fill in the blank: The _____ distribution best models the number of heads in 10 fair coin flips. 1 / 1 point

- ○ Bernoulli
- ○ Poisson
- ◉ Binomial
- ○ Normal

✓ Correct

8. A data professional working for a smartphone manufacturer is analyzing sample data on the weight of a specific smartphone. The data follows a normal distribution, with a mean weight of 150g and a standard deviation of 10g. According to the empirical rule, approximately what percentage of the data values lie between 140g and 160g? 1 / 1 point

- 50%
- 68%
- 99.7%
- 95%

Correct

9. The mean and the standard deviation of a standard normal distribution always equal what values? 1 / 1 point

- Mean = 2; standard deviation = 1
- Mean = 0; standard deviation = 1
- Mean = 0; standard deviation = 2
- Mean = 1; standard deviation = 2

Correct

10. A data professional is analyzing sales data for a retail store. The data follows a normal distribution. What Python function can they use to compute z-scores for the data? 1 / 1 point

- `median.zscore()`
- `mean.zscore()`
- `stats.zscore()`
- `normal.zscore()`

Correct