# Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 80%. We keep your highest score.

Next item →

**1.** Which of the following is a TRUE statement about classification? 1 / 1 point

- ○ In a classification problem, the target variable has only two possible outcomes.
- ○ Classification is an unsupervised task.
- ◉ Classification is a supervised task.

**Correct**
That's correct!

**2.** In which phase are model parameters adjusted? 1 / 1 point

- ○ Testing phase
- ◉ Training phase
- ○ Model parameters are constant throughout the modeling process.
- ○ Data preparation phase

**Correct**
That's correct!

**3.** Which classification algorithm uses a probabilistic approach? 1 / 1 point

- ○ k-nearest-neighbors
- ○ none of the above
- ○ decision tree
- ◉ naive bayes

**Correct**
That's correct!

**4.** What does the 'k' stand for in k-nearest-neighbors? 1 / 1 point

- ○ the number of samples in the dataset
- ○ the distance between neighbors: All neighboring samples that are 'k' distance apart from the sample are considered in classifying that sample.
- ○ the number of training datasets
- ◉ the number of nearest neighbors to consider in classifying a sample

**Correct**
That's correct!

**5.** During construction of a decision tree, there are several criteria that can be used to determine when a node should no longer be split into subsets. Which one of the following is NOT applicable? 1 / 1 point

- ◉ The value of the Gini index reaches a maximum threshold.
- ○ The number of samples in the node reaches a minimum threshold.
- ○ The tree depth reaches a maximum threshold.
- ○ All (or X% of) samples have the same class label.

**Correct**
That's correct!

**6.** Which statement is true of tree induction? 1 / 1 point

- ○ For each node, splits on all variables are tested to determine the best split for the node.
- ◉ All of these statements are true of tree induction.
- ○ An impurity measure is used to determine the best split for a node.
- ○ You want to split the data in a node into subsets that are as homogeneous as possible

**Correct**
That's correct!

**7.** What does 'naive' mean in Naive Bayes? 1 / 1 point

- ◉ The model assumes that the input features are statistically independent of one another. The 'naïve' in the name of classifier comes from this naïve assumption.
- ○ The full Bayes' Theorem is not used. The 'naive' in naive bayes specifies that a simplified version of Bayes' Theorem is used.
- ○ The Bayes' Theorem makes estimating the probabilities easier. The 'naïve' in the name of classifier comes from this ease of probability calculation.

**Correct**
That's correct!

**8.** The feature independence assumption in Naive Bayes simplifies the classification problem by 1 / 1 point

- ○ ignoring the prior probabilities altogether.
- ○ assuming that the prior probabilities of all classes are independent of one another.
- ◉ allowing the probability of each feature given the class to be estimated individually.
- ○ assuming that classes are independent of the input features.

**Correct**
That's correct!