C# Generics Knowledge Test - Answers

## 1. Describe the problem generics address.

Generics provide type safety and code reusability by allowing you to define classes, methods, and data structures with a placeholder for the data type, avoiding the need for casting and reducing runtime errors.

## 2. How would you create a list of strings, using the generic List class?

List<string> myList = new List<string>();

## 3. How many generic type parameters does the Dictionary class have?

Two: one for the key and one for the value (Dictionary<TKey, TValue>).

## 4. True/False. When a generic class has multiple type parameters, they must all match.

False

## 5. What method is used to add items to a List object?

The Add() method.

## 6. Name two methods that cause items to be removed from a List.

Remove() and RemoveAt().

## 7. How do you indicate that a class has a generic type parameter?

By using angle brackets after the class name, e.g., class MyClass<T>.

## 8. True/False. Generic classes can only have one generic type parameter.

False

## 9. True/False. Generic type constraints limit what can be used for the generic type.

True

## 10. True/False. Constraints let you use the methods of the thing you are constraining to.

True