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1. For a class `Rectangle`, which of these represents the correct syntax for defining an extension function `getWidth`?

1 / 1 point

☐ 1 fun Rectangle.getWidth(): Int

☒ 1 fun Rectangle.getWidth(): Int

☐ 1 fun getWidth<Rectangle>(): Int

☒ Correct
Correct. You use the dot operator after the class name and before the function name to define an extension function.

2. For the extension function `fun Rectangle.getWidth(): Int`, what is the correct way to call the function in the code?

1 / 1 point

☐ 1 Rectangle.getWidth()

☒ 1 Rectangle().getWidth()

☐ 1 getWidth(Rectangle())

☒ Correct
Correct. You call an extension function using an instance of the class on which the function is defined.

3. Which type of testing is performed to test individual components of an application's code logic?

1 / 1 point

- ☐ Integration testing
☒ Unit testing
☐ End-to-end testing

☒ Correct
Correct. Unit testing is performed to test individual components, also known as the unit under test.

4. While using JUnit, which annotation is used to mark a function as a unit test?

1 / 1 point

- ☐ @UnitTest
☒ @Test
☐ @JUnitTest

☒ Correct
Correct. You use @Test annotation to mark a function as a test.

5. When should you use mocks in your tests?

1 / 1 point

- ☐ When you need to define a complete alternate definition of an object to be used for testing.
☒ When there are objects that are not to be tested but are needed because the code under test depends on them.
☐ When you need to test only some specific behavior of an object

☒ Correct
Correct. You use mocks to simulate the behavior of objects that the test code depends on.

6. Which of these is a definition of the `List` collection type?

1 / 1 point

- ☐ An unordered group of elements that cannot contain duplicate elements.
☒ An ordered group of elements that can contain duplicate elements.
☐ An unordered group of elements that can contain duplicate elements.

☒ Correct
Correct. A List is an ordered group of elements that can contain duplicate elements.

7. What is the output of the code below:

1 / 1 point

```
1 val numberSet = setOf(1, 8, 5, 7, 5, 2)
2 println(numberSet)
3
```

- ☐ [1, 8, 5, 7, 5, 2]
☒ [1, 8, 5, 7, 2]
☐ [1, 8, 7, 2]

☒ Correct
Correct. A set cannot contain duplicate elements.

8. What is the output of the following code:

1 / 1 point

```
1 val map = mapOf(
2     1 to 90,
3     2 to 93,
4     3 to 91,
5     4 to 92,
6     2 to 95,
7     5 to 93
8 )
9 println(map)
```

- ☐ {1=90, 2=93, 3=91, 4=93, 5=93}
☒ {1=90, 2=95, 3=91, 4=93, 5=93}
☐ {1=90, 2=93, 3=91, 4=93, 2=95, 5=93}

☒ Correct
Correct. A map stores unique keys, but the values do not have to be unique.

9. Which of these represents the correct syntax for defining a generic class?

1 / 1 point

☐ 1 class <T> Item(t: T) { }

☒ 1 class Item<T>(t: T) { }

☐ 1 class <T>.Item(t: T) { }

☒ Correct
Correct. The generic parameter enclosed in the angle brackets is written after the class name.

10. Which of these represents the correct syntax for defining a generic function?

1 / 1 point

☐ 1 fun sampleFunction<T> (item: T) { }

☒ 1 fun <T> sampleFunction(item: T) { }

☐ 1 fun <T>.sampleFunction(item: T) { }