✓ **Congratulations! You passed!**
TO PASS 80% or higher

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GRADE
90%

Graded Quiz: Test your understanding of OOP in Java

LATEST SUBMISSION GRADE

90%

1. Which of the following statements is **_false_**?

   1 / 1 point

   ○ The package **java.lang** is included with each Java application and does not need to be explicitly imported.

   ○ You can import either individual classes in a package or all the objects in a package to use in your code.

   ◉ Each Java package can only contain one object.

   ○ Packages create name spaces so that developers do not have to worry about other developers using the same name for their objects.

   > ✓ **Correct**
   > Correct! Java packages can contain many objects, and they often do.

2. Which of the following statements about **abstract** classes is **_true_**?

   1 / 1 point

   ○ Abstract classes can only be inherited by **ONE** subclass.

   ◉ Abstract classes cannot be instantiated and can only be inherited by subclasses.

   ○ Abstract classes cannot be instantiated or inherited by subclasses. They are used by directly referring to their class name.

   ○ Abstract classes can be instantiated but cannot be inherited by subclasses.

   > ✓ **Correct**
   > Correct!

3. In the following code block, which method is an abstract method?

   1 / 1 point

   ```java
   public class Student {

       private String studentID;

       public abstract void getGPA();

       public void printStudentID() {
           System.out.print("ID: " + studentID);
       }

       public void setStudentID(String newID) {
           studentID = newID;
       }

       public String getStudentID() {
           return studentID;
       }
   }
   ```

   ○ getStudent ID()

   ◉ getGPA()

   ○ setStudentID(String newID)

   ○ printStudentID()

   > ✓ **Correct**
   > Correct!

4. Which is the correct way to call the static method **circleArea( )** defined in the following code block?

   1 / 1 point

```
1 ▾ public class Tools {
2
3       public static float pi = 3.1417;
4
5 ▾     public static float circleArea(float radius) {
6           return radius * radius * pi;
7       }
8 }
```

○
```
1  Tools tools = new Tools();
2
3  float area = tools.circleArea(25.0);
```

○
```
1  float area = Tools.static.circleArea(25.0);
```

○
```
1  float area = (static)Tools.circleArea(25.0);
```

◉
```
1  float area = Tools.circleArea(25.0);
```

✓ **Correct**
Correct!

5. The following code block defined a static variable **pi**. What is the **correct** way to use this variable in our code?   `1 / 1 point`

```
1 ▾ public class Tools {
2
3       public static float pi = 3.1417;
4
5 ▾     public static float circleArea(float radius) {
6           return radius * radius * pi;
7       }
8 }
```

○
```
1  Tools.static.pi
```

○
```
1  (static float)Tools.pi
```

○
```
1  pi
```

◉
```
1  Tools.pi
```

✓ **Correct**
Correct!

6. Which of the follow statements regarding **final** methods is **true**?   `0 / 1 point`

◉ When a method is marked final, no subclasses can access it.

○ When a method is marked final, only the object itself or its subclasses can access it.

○ When a method is marked final, no subclasses may override and redefine it.

○ When a method is marked final, it will not have a function body.

! **Incorrect**
Incorrect! Refer to Task 7 if you need a refresher.

7. Which of the following statements about abstract methods is **true**?   `1 / 1 point`

○ An abstract method declaration can have a function body but subclasses can override it.

○ An abstract method must also be declared **final**.

◉ An abstract method declaration does not have a function body because the subclasses will define the function body.

○ An abstract method must not return any value.

8. One of the purposes of Java interface is: `1/1 point`

○ Provides a way to present data to the user.

○ Allow objects to communicate with each other directly.

○ Allow different programming languages to work together.

◉ Specify what methods need to be defined for the objects that implement that interface.

9. Regarding this code block, which of the statements is **true**?   `1/1 point`

```
1   public static final boolean checkPassword(String password) {
2       boolean result = false;
3       // logic to check password here
4       return result;
5   }
```

◉ The method checkPassword is a **static** method and it cannot be overridden in any subclasses.

○ The method **checkPassword( )** is a static method but becomes non-static if it is overridden and redefined in its subclasses.

○ Will generate an error when compiled because **static** and **final** cannot be used together.

○ The method **checkPassword( )** cannot be used unless it is overridden and redefined in its subclasses.

10. Which of the following statements about Java interface is **true**?   `1/1 point`

○ Methods in interfaces have function bodies although they can be overridden by objects that implement them.

○ Abstract classes cannot declare implementation of interfaces.

◉ An object can choose to implement more than one interface.

○ Interfaces are properties of objects and only their subclasses can implement those interfaces.