

CS 284 A/B: Quiz 1

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Student Name:

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Exercise 1 (3 points)

You are given a `Circle` class that contains a method called `area` that receives an argument `radius` of type `double` and executes the following code:

```
double area = java.lang.Math.PI * radius * radius;  
2 return area;
```

Would you classify this method as an instance or class method?

Exercise 2 (7 points)

Consider the following code. Methods that are labeled as “unique” are only available in one of the classes.

```
public Class Computer{  
2     ...  
    public double getWeight() { ... };  
4 }  
public Class Desktop extends Computer{  
6     // unique to Desktop class  
    double getWirelessKeyboardStatus() { ... };  
8     ...  
}  
10 public Class Laptop extends Computer{  
    // unique to Laptop class  
12    double getBatteryDuration() { ... };  
    ...  
14 }
```

Which of the following statements are valid? If any of them are invalid, why is that? For statements (3-7), assume that the variables have been defined as in (1-2).

1. `Computer aComputer = new Laptop();`
2. `Desktop aDesktop = new Desktop();`
3. `double aComputer.getWirelessKeyboardStatus();`
4. `double aComputer.getWeight();`
5. `double aComputer.getBatteryDuration();`
6. `double aDesktop.getWirelessKeyboardStatus();`
7. `double aDesktop.getWeight();`