# Quiz 2: Methods

## Question 1: Method Overload

Consider the following Java code:

```java
public class punchcard {
    public static int add(int a, int b) {
        return a + b;
    }
    public static double add(double a, double b) {
        return a + b;
    }
    public static void main(String[] args) {
        int result1 = add(2, 3);
        double result2 = add(2.5, 3.7);
        System.out.println(result1);
        System.out.println(result2);
    }
}
```

What would be the output of the code?

A) 5 and 6

b) 5 and 6.2
c) 5.0 and 6
d) 5.0 and 6.2
e) error

*answer*: b

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## Question 2: Recursive Method

Consider the following recursive Java method:

The `factorial` method should break out of the recursion when the value of `n` is 0 or 1. Otherwise, it should return the product of `n` and the result of calling `factorial` with `n - 1`.

```java
public class punchcard {
    public static int factorial(int n) {
        if (n == 0 || n == 1) {
            ________;
        } else {
            return n * factorial(n - 1);
        }
    }

    public static void main(String[] args) {
        int result = factorial(4);
        System.out.println(result);
```

```
    }
}
```

What should be placed instead of blank?

a) `break`
b) `main()`
c) `return`
d) `return 0`
e) `return 1`

*answer*: d