Quiz 2

1. **[4 marks]** You are given the following API documentation for the following Fish class:

Class Fish

Constructor Summary

Constructors	
Constructor and Description	
Fish(String name, int quantity) Creates a specific constructor with a specific name (species) and quantity	

Method Summary

Methods	
Modifier and Type	**Method and Description**
int	**addQuantity**(int quantityToAdd) Adds more fish of the same name (or species). It then returns the total quantity of fish after addition.
String	**getName**() Gets the name
int	**getQuantity**() Gets the quantity
boolean	**isEqual**(**Fish** f) Two fishes are considered equal if both the name and quantity matches
boolean	**reduceQuantity**(int quantityToReduce) Reduces the quantity of this fish in the aquarium

Which of the following would be valid code (i.e. without compilation error) when inserted into the main method of FishTest.java (below).

```
public class FishTest {
  public static void main(String[] args) {
     Fish fish = new Fish("tetra", 10);
     Fish anotherFish = new Fish("lampeye", 5);
     // insert the statement below

}
```

Circle all correct answers:

A.
```
if (fish.getName()) {
    System.out.println("fish has a name!!");
}
```

B.
```
anotherFish.addQuantity (fish.addQuantity(2));
```

C.
```
boolean b = anotherFish.reduceQuantity(anotherFish.addQuantity(2));
```

D.
```
if (!anotherFish.reduceQuantity(3)) {
    System.out.println("Oh No");
}
```

E.
```
boolean isEqual = fish.isEqual(null);
```

2. **[2 marks]** Single Responsibility Principle (SRP) basically means that we want to

   - increase the (a)_____ between things that change for the same reasons, and
   - decrease the (b)_____ between those things that change for different reasons.

3. **[4 marks]** State if the following codes compile/does not compile.
   - If it compiles, what is the output?
   - If it does not compile, what is the issue?

```
// Part (a)
public class Person {
    private String name;
    private int age;

    public Person(int age) {
        this.age = age;
    }

    public String toString() {
        return name + " : " + age;
    }
    public static void main(String[] args) {
        Person p = new Person(12);
        System.out.println(p.toString());
    }
}
```

Answer: Compile / Does not Compile [**CIRCLE** the correct answer.]

output/reason:

```
// Part (b)
public class Student {
    private String name;
    private int age;

    public String toString() {
        return name + " : " + age;
    }

    public static void main(String[] args) {
        Student p;
        System.out.println(p);
    }
}
```

Answer: Compile / Does not Compile [**CIRCLE** the correct answer.]

output/reason: