Level 1 Exam (70 points)
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1. **Write a line of code that makes a Hamburger given the code below: (3 points)**

public Hamburger (double poundsOfBeef, boolean withCheese) {
// some code
}

```
Hamburger cheeseburger = new Hamburger(6.4, true);
```

2. **Write a constructor for a Duck object that has a name and an age. (6 points)**

```
public Duck(String name, int age){
this.name = name;
this.age = age;
}
```

3. **Write code to create and initialize 4 variables: one for each of the following values: (4 points)**

The number of toes you have
The name of a favorite sports team
An instance of java.util.Random
A JFrame

```
int toes = 11;

String sportsTeam = "Yankees";

Random r = new Random();

JFrame fra = new JFrame();
```

4. **Which of these are valid JComponents: (4 points)**

JFrame
JButton
JMouseListener
JTextButton
JLabel
JOptionPane
JPane
JPanel
Frame

```
1, 2, 5, 6, 8
```

5. **List all the JComponents used to create the application shown here. (6 points)**

   JFrame, JLabel, JButton(two of them), JPanel, JTextField

6. **Write 2 lines of code that will add listeners to these two Components: (6 points)**

   JButton myButton = new JButton();

   JFrame myFrame = new JFrame();

   myButton.addActionListener(this);
   myFrame.addKeyListener(this);

7. **What method do you use to organize the layout of components in a JFrame? (3 points)**

   .pack()

8. **int checkStock(String productName, int productNumber) { //code here }**

   a) What is the return type of this method? (3 points)

   b) What parameters does it take? (3 points)

   c) What code would you need to put between the mustaches to get it to compile? (4 points)

   a.
   int

   b.
   String productName, int productNumber

   c.
   this.productName = productName;
   this.productNumber = productNumber;

9. **Write a method that quadruples a number (multiplies it by 4) and returns the result. (6 points)**

   public static int timesFour(int a) {
   int b = a * 4;
   return b;
   }

10. **What is the problem with this code (2 points) and how would you fix it (4 points)?**

```java
public class RedRedRed {

public static void main (String[] args) {
int counter = 0;
}

public void incrementCounter() {
counter++;
}
}
```

    a.
    The method incrementCounter is neither called nor used.
    b.
    I would call it when I needed to add 1 to the counter, which I might use, say, in a game.

11. **Write code to make the Dog bark given the code below. (6 points)**

```java
public class Dog {
String name;

Dog (String name) {
this.name = name;
}

void bark() {
System.out.println ("woof woof");
}
}
```

    Dog floof = new Dog("Floofy");
    floof.bark();

12. **Write code to use the EmailSender class below to send an email and print a warning if the email did not send correctly. (10 points)**

```java
public class EmailSender {

/* returns true if email was sent successfully, or false if it failed to send. */

boolean send (String greeting) { //code here }

void setEmailAddress (String email) { //code here }

}
```

    setEmailAddress("meMyself&I@gmail.org");
    if(send("hi")==false){
    System.Out.println("Warning! email did not send. There may be a glitch in the system. which may
    suggest the impending doom of your device and/or the world.");
    }