Write a Java program including a method called **rollDice** to roll two dice and return the sum of the dice using the following header:

public static int rollDice();

Roll two dice. Each die has six faces representing values 1,2,…., and 6, respectively. Check the sum of the two dice. If the sum is 2,3, or 12 (called craps), you lose; if the sum is 7 or 11 (called natural), you win; if the sum is another value (i.e., 4,5,6,8,9 or 10), a *point* is established. Continue to roll the dice until either a 7 or the same point value is rolled. If 7 is rolled, you loose. Otherwise, you win.
Use JOptionPane class to display the messages.

Your program acts as a single player. Here are some sample runs.

You rolled 5 + 6 = 11
You win

You rolled 1 + 2 = 3
You lose

You rolled 4 + 4 = 8
points is 8
You rolled 6 + 2 = 8
You win

You rolled 3 + 2 = 5
Point is 5
You rolled 2 + 5 = 7
You lose

Exercise #2-(50 points)

Part A

Write a java that fills an array with grades of type double for n classes with different number of students. Assume that each student has only one grade. You are requested to create a method called fillarray() that accepts the grades of a class, a method printarray() which prints a list of grades, a method sortarray() that sorts the grades (in descending order), and a method calavg() that calculates the class average for each class, a method calmax() that determines the highest grade in class independent of the function sort.

Part B

This part is independent of part A.

Write a java program without methods that fills up an array of strings namely student names using the Scanner class, sort this array in ascending order and then print a sorted list

Exercise #3-(5 points)

Most classes need to be imported before they can be used in an application. Why every application is allowed to use the class `String` and `System` without first importing them?

Exercise #4-(5 points)

What is the value of the expression (`1 / 2 + 3 / 2 + 0.1`)?

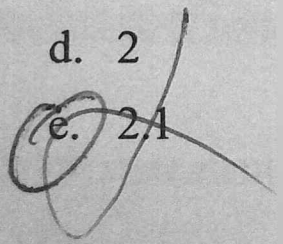
a. 1

b. 1.1

c. 1.6

d. 2

e. 2.1



What is the output of the following program (if any)?

```
public class Logic {
    public static void main(String [] args) {
        int i = 0;
        int j = 0;

        boolean t = true;
        boolean r;

        r = (t & 0<(i+=1));
        r = (t && 0<(i+=2));
        r = (t | 0<(j+=1));
        r = (t || 0<(j+=2));
        System.out.println(i + " " + j);
    }
}
```

Output

Exercise #6-(5 points)

Which statements are true?

a. The result of the expression `(1 + 2 + "3")` would be the string `"33"`.
b. The result of the expression `("1" + 2 + 3)` would be the string `"15"`.
c. The result of the expression `(4 + 1.0f)` would be the `float` value `5.0f`.
d. The result of the expression `(10/9)` would be the `int` value `1`.
e. The result of the expression `('a' + 1)` would be the `char` value `'b'`.