

Unit 2 Lab 4 - Random numbers

class hour _____

Pts: 10

Name _____

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I. 6.4 Random Numbers

(Note: The random() method is listed but not discussed in our normal blue book.)

1) a) Open **P1ch2lab4.java**

b) What Class is imported in this program by using an import statement written before **public class p1ch2lab4** in this program? _____

(Recall: The Math class is automatically imported as part of the java.lang package which is automatically imported into all Java programs.)

c) Run the program many times

d) Write the line that creates (not outputs) the random numbers

e) The random numbers are between (inclusive) what two integers? _____ and _____

f) Change the program so that the main() method has only the following single line

```
System.out.println("The random number is " + (int)(Math.random()*(10)+1));
```

(Note: All other lines are to be deleted.)

g) Run the program many times

h) Now make the program have a random number between 1 and 20

i) Write the line that generates and outputs the random numbers between 1 and 20

```
System.out.println("The random number is " + _____);
```

j) Change the program so that a random number between 10 and 50 (inclusive) is generated:

```
System.out.println("The random number is " + (int)(Math.random()*(41)+10));
```

Calculation: 50 - 10 + 1 is the 41 and 10 is the first number

k) Run the program many times

l) Change the program so that a random number between 5 and 100 (inclusive) is generated:

m) Write the line that generates and outputs the random numbers between 5 and 100

```
System.out.println("The random number is " + _____);
```

Summary

Read pages 90-91. *The formula `(int)(Math.random()*(big - small+ 1) + small);` is more comprehensive than the last one on the top of page 91.

Answer the following

1) `(int)(Math.random()*(80)+2)` generates random numbers between (inclusive) what two numbers?

_____ and _____

Turn in this sheet to be graded!