

ECE 71 – Engineering Computations in C

Class Assignment – October 15, 2009

Professor Kriehn

Due By: Midnight on Thursday, October 22, 2009

Print out your algorithms and commented code for each of your homework solutions.

HOMEWORK #19 – Dice Simulator

Write a program to simulate an experiment rolling two, six-sided "fair" dice. Allow the user to enter the number of rolls of the dice to simulate. What percentage of the time does the sum of the dots on the dice equal 8 in the simulation?

Specifications.

Specifications:

Prompt the user to enter a seed.

Then prompt for the number of tosses .

Output the number of 8's with %5i format.

Output the percentage of 8's with %5.2 format.

For this problem, I want an actual percentage.

Make sure that you use the `rand_int()` function that I gave you during class notes. Use the following function prototype:

```
int rand_int(int a, int b)
```

Here's an example output:

```
~> hw19.o
Please enter a positive integer random seed.
Input seed: xxx
Please enter the number of times that the die are to be thrown.
Enter the number of tosses: xx
The number 8 appeared    xx times
The number 8 appeared xx.xx% of the time.
~>
```

Once you have verified the operation of your program, submit your source code to the Grader Program.

HOMEWORK #20 – Wind Storm Simulation

Perform Problems 20, 21, and 22 in your book. Copy your generated data into Excell and plot the results. Provide a printout of your commented code, an example of your program working, your output data, and its plot. You must use functions to complete this homework.