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AE 227 – Engineering Digital Computation

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**Problem 1:**

Output to the command window:

There were 9 As.

There were 63 Bs.

There were 43 Cs.

There were 70 Ds.

There were 5 Fs.

The lowest score was a 38.4.

The highest score was a 113.9.

The average score was 68.3.

The standard deviation was 17.1786.

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**Problem 2:**

All questions are answered with command window output. I was not sure if I was supposed to put it here or in the command window, so I put the answers in the command window because that covers both places since the command window output is pasted here as well.

Straight Craps Program:

Number of games? >1000000

The probability that the roller wins is 88.9250%.

The probability that the roller loses is 11.0749%.

You should always bet on the roller.

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Vegas Craps Program:

Number of games? >1000000

The probability that the roller wins is 88.9210%.

The probability that you tie with the roller is 2.7739%.

The probability that the roller loses is 8.3050%.

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Vegas Craps with betting program (expected value):

How much are you betting? ($) >100

Number of games? >1000000

The expected value if you bet on the roller, assuming you bet $100 is $180.55.

The expected value if you bet against the roller, assuming you bet $100 is $19.45.

The better outcome is, by far, to bet on the roller.

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