

Lab Assignment #14

This lab is due at 9:35 AM on Wednesday, 3/20 and is worth 6 points. This may be done individually, or in a group of 2 or 3 people.

Write each probability answer as a fraction, or a decimal to at least 3 significant digits, or a percent to at least 3 significant digits. Show work.

1) The random variable x represents the number of times a 9-year-old has watched Elemental, in the last 3 months.

x	$P(x)$
0	0.045
1	0.128
2	0.337
3	0.231
4	0.178
5	0.053
6	0.017
7	0.011

a) What fraction of 9-year-olds have watched Elemental, more than 3 times in the last 3 months?

b) What fraction of 9-year-olds have watched Elemental, between 1 and 4 times, inclusive, in the last 3 months?

2) Fill in the two blanks to make a valid discrete probability distribution. There is not a unique solution.

<u>Value</u>	<u>Probability</u>
0	12%
1	18%
2	_____
3	9%
4	2%
5	13%
6	_____
7	12%

3) Every day when you drive to work, Monday through Friday, there is a 29% chance that the freeway ramp will have metering lights on. During a span of 3 work weeks (15 days), what is the probability that the metering lights are on...

a) Exactly 4 times?

b) Fewer than 4 times?

4) In a recent election, 68.7% of voters in the state of Nevada voted for Andrews for Senate. If 20 voters are chosen at random, what is the probability that...

a) exactly 15 voters voted for Andrews?

b) At least 12 voters voted for Andrews?

5) A multiple-choice test contains 14 problems, each with 5 possible answers. If you guess randomly, what is the probability that you will get...

a) All the questions wrong?

b) Exactly 3 questions right?

c) More than 5 questions right?