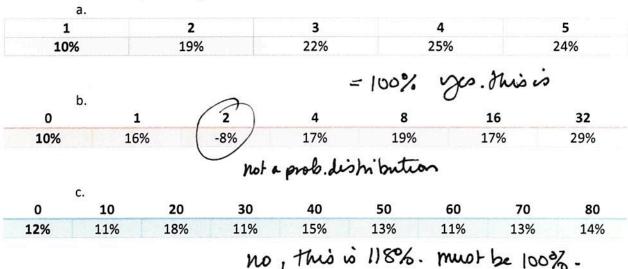Name _____KEY_____

Instructions: You must show all work to receive full credit for the problems below. You may use Excel where appropriate. Any datasets needed will be posted on Canvas with the quiz file, and you should submit such work along with your quiz. Round answers to two decimal places unless other instructions are given in the problem. Do not say "see Excel". Paste your answers into the quiz.

1. A coin is flipped 10 times. How many different ways are there to get 6 heads?

$$\binom{10}{6} = 10C6 = 210$$

2. The tables below show three possible probability distributions. Determine if any of them satisfy all the rules of probability.

   a.

1	2	3	4	5
10%	19%	22%	25%	24%

= 100% yes. this is

   b.

0	1	2	4	8	16	32
10%	16%	-8%	17%	19%	17%	29%

not a prob. distribution

   c.

0	10	20	30	40	50	60	70	80
12%	11%	18%	11%	15%	13%	11%	13%	14%

no, this is 118%. must be 100%.

3. If the probability of getting a head on an unfair coin is 78%, what is the probability of getting a tail?

$$1 - 0.78 = 0.22$$

$$22\%$$