

Name: _____ LAVC / Raskoff / Statistics 1 / _____

Probability and coin flipping

Type of coin: _____

This is the probability distribution for flipping a coin once (left side of table) and twice in a row (right side).

TABLE 1. PROBABILITY DISTRIBUTION (HYPOTHETICAL COIN FLIPS!)	ONE COIN FLIP			TWO COIN FLIPS		
	UP SIDE OF COIN (X)	NUMBER (F)	PROBABILITY	PERCENT (%)	HEADS ON UP SIDE OF COIN (X)	PROBABILITY
	Heads	1	.5	50%	0 (tails AND tails)	.25
	Tails	1	.5	50%	1 (heads AND tails) OR (tails AND heads)	.50
	totals	2	1.0	100%	2 (heads AND heads)	.25
				totals	1.00	

1. Flip your coin 10 times and fill in the grid below; then flip it twice in a row 10 times and fill in the grid below.

TABLE 2. FREQUENCY DISTRIBUTION (YOUR ACTUAL COIN FLIPS!)	ONE COIN FLIP			TWO COIN FLIPS		
	UP SIDE OF COIN (X)	NUMBER (F)	PERCENT (%)	HEADS ON UP SIDE OF COIN (X)	NUMBER (F)	PERCENT (%)
	Heads			0 (tails & tails)		
	Tails			1 (heads AND tails) OR (tails AND heads)		
	totals			2 (heads & heads)		
				totals		

2. How closely does the data from your coin flip experiment match with the probability distribution?

3. After we sum all the coin flips from class, write in the totals below.

TABLE 3. FREQUENCY DISTRIBUTION (ACTUAL COIN FLIPS FOR THE ENTIRE CLASS!)	ONE COIN FLIP			TWO COIN FLIPS		
	UP SIDE OF COIN (X)	NUMBER (F)	PERCENT (%)	HEADS ON UP SIDE OF COIN (X)	NUMBER (F)	PERCENT (%)
	Heads			0 (tails & tails)		
	Tails			1 (heads AND tails) OR (tails AND heads)		
	totals			2 (heads & heads)		
				totals		

4. How closely do the percentages of the class (Table 3) match with the probability distribution (Table 1)? Is it closer to the probabilities than that of your own experiment (Table 2)?