

Can You Imitate a Coin?

- On the half-sheet provided by your teacher, enter the sort of results you'd expect to get if you were to flip a coin 21 times. Enter what you imagine getting on the first flip above the 1, enter the second flip above the 2, and so on. Write "Fake" on the back of the sheet.

If you're good at making up these data, someone looking at what you wrote wouldn't be able to tell whether they are real results from actually flipping a coin or results you made up.

Can You Spot Fake Data?

- Here are four sets of coin-flip data. Some of these results are from actually flipping a coin. But others were made up by students to look like real coin flips.

For each sequence, note whether you think the results are real or fake by circling *Real* or *Fake*.

a. *Real Fake*

T	T	H	T	H	T	T	H	H	H	T	H	T	H	H	T	H	T	T	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

b. *Real Fake*

H	T	H	H	T	H	T	T	H	T	H	H	T	T	H	T	H	T	H	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

c. *Real Fake*

H	T	H	H	H	H	T	T	H	T	T	T	H	H	T	T	H	H	T	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

d. *Real Fake*

T	T	T	H	T	T	T	T	H	T	T	T	T	T	T	T	H	T	H	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

- Briefly explain how you think you can tell the difference between the real and fake results.

Can You Spot the Fake Data Now?

8. Here are the same four sequences you saw earlier. Guess again which are fake and which are real. For each sequence, circle *Real* or *Fake*.

a. *Real Fake*

T	T	H	T	H	T	T	H	H	H	T	H	T	H	H	T	H	T	T	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

b. *Real Fake*

H	T	H	H	T	H	T	T	H	T	H	H	T	T	H	T	H	T	H	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

c. *Real Fake*

H	T	H	H	H	H	T	T	H	T	T	T	H	H	T	T	H	H	T	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

d. *Real Fake*

T	T	T	H	T	T	T	T	H	T	T	T	T	T	T	T	H	T	H	T	H
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

9. Briefly explain how you think you can tell the difference between the real and fake results. (Afterward, your teacher will tell you which are real and which were made up. But you probably already know.)