You need: two classmates

Tonina, Tanya, and André are playing a variation of the paper, scissors, rock game. On the count of 3, they all show one of these three signs:


Tonina gets a point if they all show the same sign.
Tanya gets a point if only two players show the same sign.
André gets a point if they all show a different sign.
The person with the most points wins.
"This looks pretty fair," says André.
"I'm not so sure," says Tonina.
"Let's play the game 30 times and see how it goes," suggests Tanya.

1. Who do you think will win? Play the game 30 times with two other people.

Choose who will be Tonina, Tanya, and André and keep a tally of the points.

| Player | Tally | Total |
| :--- | :--- | :--- |
| Tonina |  |  |
| Tanya |  |  |
| André |  |  |

2. a. List all the possible outcomes for this game.
b. Apart from using a list, how could you show the possible outcomes?
3. a. Is the game fair? Explain, using your list of possible outcomes.
b. What is the probability of Tonina winning? Tanya? André?
c. Can you find a better way to award points?
4. Play the game another 30 times to test if your suggestion is fairer.
