***Fair or Unfair?***

Directions: Your group will toss 2 pennies. The scoring will be done as follows: Player A gets 1 point if the toss results in “two heads”; Player B gets 1 point if the toss results in “two tails”; Player C gets 1 point if the toss results in “one head and one tail.” The game is over after 20 tosses. The player with the most points wins. Then as a class we will discuss whether we think the game is fair or unfair.

Members of Group: (A) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (B) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (C) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Before playing the game, do you think this game is fair or unfair? Why?

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| ***Coin Toss*** | ***Player A*** | ***Player B*** | ***Player C*** |
| Toss #1 |  |  |  |
| Toss #2 |  |  |  |
| Toss #3 |  |  |  |
| Toss #4 |  |  |  |
| Toss #5 |  |  |  |
| Toss #6 |  |  |  |
| Toss #7 |  |  |  |
| Toss #8 |  |  |  |
| Toss #9 |  |  |  |
| Toss #10 |  |  |  |
| Toss #11 |  |  |  |
| Toss #12 |  |  |  |
| Toss #13 |  |  |  |
| Toss #14 |  |  |  |
| Toss #15 |  |  |  |
| Toss #16 |  |  |  |
| Toss #17 |  |  |  |
| Toss #18 |  |  |  |
| Toss #19 |  |  |  |
| Toss #20 |  |  |  |
|  | | | |
| Totals: |  |  |  |

2. After playing the game, did your opinion about the fairness of the game change? Why or why not?

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Source: Van De Walle, K. B.-W. (2010). *Elementary and Middle School Mathematics: Teaching Developmentally.* Boston: Pearson.