# $\therefore$ Three Point, One Point Game Worksheet 4.1 D 

This is a game for two players. Each game requires a pair of dice.

## RULES:

1. Choose who will be PLAYER A and who will be PLAYER B. During the game you will not switch roles.
2. PLAYER A has the numbers 5 and 8. PLAYER B has all the remaining numbers.
3. Each player starts out with 10 points.
4. Take turns rolling the dice (to make sure nobody is cheating!).
5. Each time a sum of 5 or an 8 is rolled, PLAYER A takes 3 points away from PLAYER B and adds them to his/her own points. A +3, B -3
6. Each time any other sum is rolled PLAYER B takes away 1 point from PLAYER A and adds them to his/her own points. A -1, $\mathbf{B}+\mathbf{1}$
7. The player with the most points at the end of ten rolls is the winner. If one player runs out of points before ten rolls, then the other player is the winner.

Before you begin: Predict if you think this game is fair or unfair. Why do you think so? Play the game several times to determine if you are correct.

|  | Start | Roll 1 | Roll 2 | Roll 3 | Roll 4 | Roll 5 | Roll 6 | Roll 7 | Roll 8 | Roll 9 | Roll |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 10 |  |  |  |  |  |  |  |  |  |  |  |$|$


|  | Start | Roll 1 | Roll 2 | Roll 3 | Roll 4 | Roll 5 | Roll 6 | Roll 7 | Roll 8 | Roll 9 | Roll |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 10 |  |  |  |  |  |  |  |  |  |  |  |


|  | Start | Roll 1 | Roll 2 | Roll 3 | Roll 4 | Roll 5 | Roll 6 | Roll 7 | Roll 8 | Roll 9 | Roll <br> 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| PLAYERA | 10 |  |  |  |  |  |  |  |  |  |  |
| PLAYER B | 10 |  |  |  |  |  |  |  |  |  |  |


|  | Start | Roll 1 | Roll 2 | Roll 3 | Roll 4 | Roll 5 | Roll 6 | Roll 7 | Roll 8 | Roll 9 | Roll <br> 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| PLAYERA | 10 |  |  |  |  |  |  |  |  |  |  |
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|  | Start | Roll 1 | Roll 2 | Roll 3 | Roll 4 | Roll 5 | Roll 6 | Roll 7 | Roll 8 | Roll 9 | Roll |
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| PLAYERA | 10 |  |  |  |  |  |  |  |  |  |  |
| PLAYER B | 10 |  |  |  |  |  |  |  |  |  |  |


|  | Start | Roll 1 | Roll 2 | Roll 3 | Roll 4 | Roll 5 | Roll 6 | Roll 7 | Roll 8 | Roll 9 | Roll |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 10 |  |  |  |  |  |  |  |  |  |  |  |$|$

Based on your outcomes, does your prediction still hold true? Explain in detail.

