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| **PLTW Logo_Web Small** |
| **Project 1.1.5 The Board Game Counter** |
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| **Conclusion**If you were to use your *Board Game Counter* to play Monopoly® during a family game night, you would want the numbers rolled to be random and evenly distributed (i.e., the likelihood of rolling a one is the same as two, is the same as three, etc). How fair is your Board Game Counter? To measure this, use the data table shown below to tally each number displayed as the roll button is pressed one hundred times. After you complete the tally, calculate the total count for each number and its distribution.

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| NumberRolled | TallyCount | TotalCount | Distribution |
| 1 | IIIIIIIIIIIIIII | 15 | 15/52=28.8% |
| 2 | IIIIIIIIIIIIIIII | 8 | 8/52=15.4% |
| 3 | IIIIIIIIIIIIII | 7 | 7/52=13.5% |
| 4 | IIIIIIIIIIIIIIIIIIIIIIII | 12 | 12/52=23.1% |
| 5 | IIIIIIIIIIII | 6 | 6/52=11.5% |
| 6 | IIIIIIII | 4 | 4/52=7.7% |
| 7 |  | 0 | 0% |

1. How evenly distributed were the numbers for your *Board Game Counter*? If your game was perfect, then each number should have come up approximately 16.67% of the time. Do you think your *Board Game Counter* is fair? Why or why not?

My game board counter isn’t fair. Some numbers such as one has almost a 30% chance and other numbers such as 6 have only a 7.7% chance.1. Another word for troubleshooting is *debugging*. Do a little research (Google, of course) to determine the origin of the term debug and who was the person to coin the phrase.

The word bug and debug were coined by computer scientist and U.S. navy Rear Admiral Grace Hopper after an incident involving Harvard University’s Mark II calculator. |