

Wastepaper Basketball Math

If your child is in the decimal doldrums, or suffering from acute fear of fractions, take heart. They're probably just struggling to understand how numbers on a page can relate to the "real world" outside the classroom. In fact, kids can greatly further their understanding of ratios by applying them to events in their everyday lives. This game of wastepaper basketball not only gives kids and their parents a chance to play together, but it's also an enjoyable way to demonstrate how recorded results can be expressed in whole numbers, fractions, and decimals. So get your mental sneakers on and start shooting!

What You Need:

- Wastebasket
- Trash ball
- Paper
- Pencil

What You Do:

1. Explain to your child that you are going to play Wastepaper Basketball, and record your successes and failures. Have your child set up the wastebasket a reasonable distance from the throw line. Suggest that each of you attempt to throw a trash ball into the basket 10 times.
2. Rotating turns, throw the ball ten times each. After each throw, record your own results. You can make a chart to show successful and failed attempts or you can use a simple tally system.
3. Now that you have your data, it's time to find the ratio which reflects each of your results. Start by showing the ratio of your attempts and then let your child find their ratios. For example, if you were successful 4 times then the ratio of your successful attempts is 4 out of 10. The ratio that shows your failed attempts is 6 out of 10.
4. Next, show your child how to write the ratio in decimal form. In this example, the decimal 0.4 shows your successes and the decimal 0.6 shows your failures. If your child is confused by this representation, start with the fractions $\frac{4}{10}$ and $\frac{6}{10}$ and then convert them to decimal form by dividing the numerator by the denominator. Remind your child that the number 4 represents your successful tries and the number 10 represents the total number of attempts.



Setting up a game like this gives your child the opportunity to work with ratios. It's a fun way to show how the results of a game can be expressed using whole numbers, decimals, and fractions. To expand on this exercise, try looking over the sports section of the newspaper and identifying player statistics expressed as decimals. What do they mean? Is that a good statistic, or is the player doing poorly? Sports statistics are a great way to practice math, so keep track of your own, and keep on the lookout for other ways to make fraction math a slam dunk!