

RAFT IDEAS

Topics: Math, Arithmetic,
Multiplication

Materials List

- ✓ Box, empty, ~45 cm x 60 cm (1½ ft x 2ft)
- ✓ 25 Portion cups
- ✓ Permanent marker
- ✓ Hot glue or tape
- ✓ 10 "game pieces" to toss (small objects that can be written on with permanent marker)

This activity can be used to teach:

Common Core Math Standards:

- Multiplication and division (Operations and Algebraic Thinking, Grade 3, 5 & 7; Number and Operations in Base Ten, Grade 3, 3; Grade 4, 4 & 5)
- Problem Solving and Reasoning (Math Practices Grades K-6)
- Variations can be used in any grade, depending on the ability levels of the students, to teach addition, fractions, and equations



Carnival Math

“Step Right Up!” and improve your arithmetic!



Although carnival games are designated “games of skill”, winners are usually determined by chance. In this carnival-style game, skills in arithmetic are required just to play... so in the game of math education, everybody is a winner!

Assembly

1. Hot glue or tape the portion cups onto one end of the bottom of the box, placing them as close together as possible.
2. Using a permanent marker, number each cup near the rim with numbers zero through nine, distributing the numbers randomly.
3. Number the game pieces on each side with numbers zero through nine. (For a more complex game, vary the numbers on the sides of some game pieces.)
4. Decorate the box, if desired.

Playing the Game (Any number of players)

1. Draw three game pieces. All player use the same pieces during a round.
2. Player 1 tosses the game pieces into the portion cups. They calculate their score by multiplying the number on the game piece by the number of the cup it landed in and then adding all three products.
3. The next player takes a turn, aiming for a higher score.
4. Each player takes a turn. The player with the highest score wins the round.

The Math Behind the Activity

Basic multiplication and addition are the only math skills required for this game. Repetition is the key to honing these skills, and this game makes memorization more fun than flash cards. Teachers can also customize game boards (cups and game pieces) to include different numbers, according to student ability levels.

Game Variations for Different Ability Levels

Add 'Em Up!

Using unnumbered game pieces have students add the numbers on the cups where the pieces land. The winner is the student with the highest score.

Under 11 / Over 30

Use 6 unnumbered game pieces. The goal is for the numbers of the “target” portion cups to add up to fewer than 11 or over 30 (or any other variation that you deem appropriate.) Each student either wins or loses on each round.

Plug It In

Write an algebraic expression in 3 variables (e.g., $2X + 3Y - 4Z$). Use a game piece for each of the 3 variables. Students toss the games pieces into the cups and calculate their score using the equation. The winner is the student with the highest score.

Web Resources (Visit www.raft.net/raft-idea?isid=26 for more resources!)

- Teacher designed math courses from the New Jersey Center for Teaching & Learning – <https://njctl.org/courses/math>