



Going to Mombasa

Standard 1 - 8

Skills: Addition (or multiplication) practice.

Equipment

3 dice

Pencil and paper (*see reverse for score chart example*)

How to play

Roll the dice and keep the highest. Roll the remaining dice and again set aside the highest. Roll the last die, and add up your total. Write down your score.

Play five rounds and then either total your points for the winner or simply count how many rounds were won by each player.

Variations

Older pupils could try multiplying the dice together to get their score.



Going to Mombasa

Score Card	Player 1	Player 2	Player 3	Player 4
Round 1				
Round 2				
Round 3				
Round 4				
Round 5				
Total				



Sufuri, Zero!

Standard 3 - 8

Skills: This game for two or more players gives pupils practice with **mental addition** and experience with **thinking strategically**.

The object: to be the first to score 100 points or more.

How to play: Players take turns rolling **two dice** and following these rules:

1. On a turn, a player may roll the dice as many times as he or she wants, mentally keeping a running total of the sums that come up. When the player stops rolling, he or she records the total and adds it to the scores from previous rounds.
2. But, if a 1 comes up on one of the dice before the player decides to stop rolling, the player scores 0 for that round and it's the next player's turn.
3. Even worse, if a 1 comes up on both dice, not only does the turn end, but the player's entire accumulated total returns to 0. Other players then call out, "**Sufuri, Zero!**"
4. Play continues until a player reaches a score of 100.

Teacher notes: After pupils have had the chance to play the game for several days, have a class discussion about the strategies they used. You may want to list their ideas and have them test different strategies against each other to try and determine the best way to play.

Haraka!

(Standard 4 - 8)

Skills: Multiplication

Equipment: 2 dice

How to Play:

Start with two dice and let the first player throw the dice, multiply the two numbers together, saying aloud the answer.

The first player continues rolling the dice, multiplying, and stating the answer, until another player catches him in an error.

The number of throws and correct answers are the points that player scores on that round.

Then, the dice move to the next player.

The goal is to roll and calculate as quickly and accurately as possible, both coming with practice.

Variation: add one dice to increase difficulty.

Variation: Use addition or subtraction.



What's My Place ?



Standard 3 - 8

Skills: Place Value

Equipment: 1 dice, paper, pencil

How To Play

1. Each player draws a place value chart.
2. Each player takes a turn to roll the dice.
3. The player determines where they want to place the number on their place value chart. They write that number in the chosen column For Example: A 4 is rolled on the dice. The player chooses to put the five in the hundreds column.
4. Play continues until each player has filled up their place value chart.
5. The players compare their final numbers. The highest number wins.

Variations:

The players decide before the game begins whether the highest or the lowest number wins.

Players draw two place value grids. Play as above. When all the places have been filled in the place value chart, players subtract (or add or multiply) the lowest number from the highest number to get their new total. The player with the highest (or lowest) final number wins.

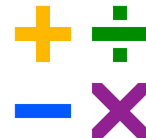
Players use larger place value charts -- ex: millions.

Thousands	Hundreds	Tens	Ones

Nine is Near Ten

Tisa Karibu Na Kumi

Skills:



Standard 3 - 8

2-3 players per team.

Equipment: 5 dice, paper and pencil.

How to play: There are ten 'rounds'. A player rolls all five dice. Using mental math and any or all math operations, all players use the numbers on the five dice to come as close to (or equal to) the 'round' number. (For example, the first round is 'Round #1', so the target answer would be '1'. The second round is 'Round #2' so the target answer would be '2', and so forth up to 'Round #10'.) All numbers of the rolled dice may be used. The player with the answer closest to the target answer, wins a point for that round. If the target number is reached, the player(s) receive TWO points for that round. Play continues for ten rounds. The player with the most points wins. (For example, if a 1, 3, 2, 2 and 5 are rolled in Round #1. A player could: $3 \times 5 - (2 \times 1) - 2 = 1$)

Variations: Use specialty dice. Use only 4 dice, or 6 dice. This is a great team game, 2-3 players per team. To make it extra exciting for an older group, you could have a "15 game" class tournament! You could even make it span a whole semester, with league charts and so on pinned to the wall of the class.

Roll 'em

Standard 4 and up

Skills: addition, subtraction, multiplication

Equipment: 4 dice (two colors)



How To Play: The first player rolls all 4 dice. He adds dice of the same color to obtain factors, then multiplies the two factors. (For example: He rolls a green 6, a green 3, a purple 5 and a purple 4. $6 + 3 = 9$ $5 + 2 = 7$ Math Fact $9 \times 7 = 63$). He writes the factors, the multiplication fact, and the answer on his paper. He reads this equation to the other players. If they agree with his answer, the player adds 63 to his total score. He passes the dice to the next player.

(If at any time someone disagrees with the player's answer, that player may challenge the answer. All players check the equation. If challenger is right, the challenger gets to add the correct score to *his* total, and the incorrect player does not add to his score. If the challenger is incorrect, the player receives DOUBLE the correct score.)

Players continue to take turns rolling the dice, adding to find the factors, and multiplying the factors to find the products, and writing the math sentence until someone reaches 1000.



Kwa heri! (Good bye)

Standard 3 and up.

Skills: addition, subtraction, multiplication

Equipment: 2 dice.

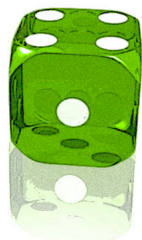
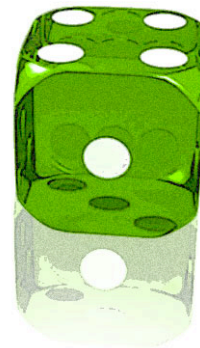
How to Play: Partners roll two dice.

Whoever calls out the sum correctly first wins the round.

Players can keep score with tally marks.

The game ends when one player has scored 20 points.

The winner says "Kwaheri" to his opponent, and the next challenger begins the next game.



Variation: To increase difficulty, players may increase the number of dice used,

and/or use other math operations (subtraction-either subtracting the smaller number from the larger number or deducting the larger number from the smaller to make a negative number; multiplication).

Variation: Use specialty dice.

Decimal Dice

Standard 4 and up

Skills: decimal addition

Equipment: 2 dice of one color, 1 dice of another color, paper and pencil.

How to Play:

Player 1 rolls the 3 dice and uses them to form a number with a decimal, using the matching color dice as whole numbers and other die as the decimal.

(Example Player 1 rolls a red 4, a red 1, and a black 6 to form the number 41.6.

He writes that number on his paper, then rolls the three dice again to form another number. He adds together the two numbers.

(Example: Player 1 rolls a red 3, a red 2, and a black 1 to form the number 32.1.

He adds $41.6 + 32.1$ for a total of 72.7.)

Player 2 takes his turn. He does the same thing.

After this first round, play continues, each player keeping a tally of their scores until one player gets closest to a total of 500 (or 1000).

Variation: Use specialty dice. Variation: Increase the number of dice, one color to form whole numbers, the other color to form decimals.

Race to 500 ! (or Pole, Pole ... Pole!)

Standard 4 and up

Skills: multiplication by 10.

Equipment: Specialty dice* for each player, paper and pencils.

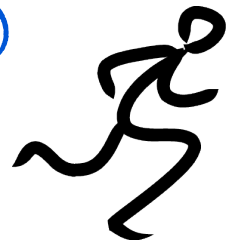
How To Play: Two players play at the same time, rolling the dice, multiplying, writing, adding, rolling their way to the finish line total of 500. (Or play independently to see how long it takes them to reach 500).

Hand each pupil a specialty die, then have them roll the die and multiply the number they roll by ten. Next, have them roll again, multiply that number by ten, and add it to the first number.

Players keep rolling, multiplying, and adding until one of them reaches 500 — and wins the race!

Variation: players challenge each other -- a tournament!

* If specialty dice are not available, regular dice may be used.



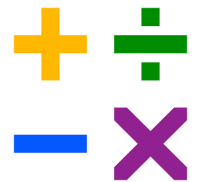


Name the Operation

This is a great team game, yet works well with any number of players.

Standard 4 and up

Skills: addition, subtraction, multiplication, division, order of operations, problem solving, thinking !



Equipment: 3 dice.

How to Play: Players (or teams) take turns rolling 3 dice. Then, they must create a problem using a single operation (addition, subtraction, multiplication, or division). They only tell their opponent the *answer* to their problem. Their opponent must try to guess which operation was used and demonstrate how the answer was arrived at.

If they are correct, they are awarded 3 points. If they give an incorrect response, they earn 0 points. If they dis-prove (show an error in calculation) the other player's answer, they earn 4 points. The first player (or team) to earn 50 points wins.

Variations: Change the goal from 50 points to another goal.

Allow the use of 2 or more operations to find each answer.

Make the game more challenging by increasing the number of dice that can be used.

Double Trouble

Standard 3 and up

Skills: adding and subtracting to 12; adding double digits.

Players: 2-5.

EQUIPMENT: one die, pencil, paper

How to Play: One of the players rolls the die and doubles the number (value) of the die to arrive at the sum, saying the sum out loud. Next, the same player rolls the die again to obtain a second number. The player subtracts the smaller number from the larger number, and says the answer out loud. If the answer is correct, the player adds that number to his score.

If the player has given an incorrect answer, the player subtracts that number from his score. It is then the next player's turn. After five rounds, the player with the highest score is the winner.

Variations: Use specialty dice. Use a pair of dice for larger numbers.

Example: A player rolls a 4. The player double that ($4 + 4 = 8$) in their heads, and says '8' out loud. Then, the player rolls a 6 on the die. The player subtracts 6 from the 8 for a total of 2. Two is the player's score for that round.

