



How Many Rows? How Many in Each Row?

You need

- two players
- one die
- recording sheet for game (one 10x10 grid for each player)

How to Play

Player A rolls a die two times. The first roll determines the number of rows and the second roll determines the number of squares in each row. Player A draws a rectangle that corresponds to the rolls in any location on the grid on the recording sheet, then writes the number sentence (for example, $3 \times 4 = 12$) in the rectangle.

Player B rolls the die twice. Again, the first roll determines the number of rows and the second roll determines the number of squares in each row. Player B draws the rectangle that corresponds to the rolls in any location on the other grid, then writes the number sentence in the rectangle.

Players take turns. Each rectangle drawn cannot overlap a previous rectangle. Each player continues until he or she is unable to place a rectangle on the grid. At that stage, the player records both the total number of squares covered by rectangles on the grid, as well as the number of uncovered squares.

Variation

After rolling the die twice to determine a product, the player can make any rectangle that covers that number of squares.



How Many Rows? How Many In Each Row?

Covered_____

Uncovered_____

Covered_____

Uncovered_____



Circles and Stars

You Need

- two players
- one die
- paper and pencil for each player

How to Play

Player A rolls the die, then draws that number of fairly large circles.

Player B rolls the die and does the same.

Player A rolls the die and draws that number of stars in each of his circles.

Player B rolls the die and does the same.

Each player writes the number sentence that tells how many stars he or she has (for example, four circles with three stars in each circle would be $4 \times 3 = 12$ stars).

Play six rounds, then determine the total number of stars that each player has.

Variation

For each round, after Player A draws stars in his circle, determine the probability that Player B will end up with more stars than Player A.

Taxman

You Need

- a partner
- paper and pencil

How to Play

Write the numbers 1 to 6 in a horizontal row. You (Player A) will play the Taxman (Player B). Every time it is your turn, you can take any number in the list, as long as at least one factor of that number is also in the list. You get your number and the Taxman gets all of the factors of that number that are on the list. For example, if you take a 4, the Taxman would get 1 and 2 since those are the factors of 4 left in the list.

The Taxman must get something every time, which means you cannot choose a number if no factors of the number remain in the list. When no number in the list has any factors left in the list, the game is over and the Taxman gets all the numbers that are left in the list.

Variation

Try Taxman with the numbers 1–10 or the numbers 1–12. Can you find a winning strategy for any string of numbers?



Tic-Tac-Toe Products

You Need

- two players
- two markers for the bottom row of factors (for example, paper clips)
- Two sets of different markers for each player to cover each product (for example, pennies and nickels)
- Tic-Tac-Toe Products Game Sheet

How to Play

Player X selects two factors at the bottom of the page by placing markers on two of the numbers (1–9) to multiply. The product of the two numbers is covered.

Player O may move only one marker to make a new product and place their marker on the grid. The markers can both be on the same number.

Players alternate moving one marker at a time and continue placing their markers on the grid until a player has marked four products in a row. Then, the players should discuss their strategies.

This game is a great way to practice and build fluency in single digit multiplication. If a player needs support a times table can be provided. Eventually a player will not need the table.



Tic-Tac-Toe Products

1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

1 2 3 4 5 6 7 8 9

Tic-Tac-Toe Products 2

81	16	63	12	45	8	27	4
32	63	24	49	16	35	8	21
72	24	18	40	12	24	6	56
40	54	30	42	20	30	10	18
45	48	35	36	25	24	15	12
64	27	48	21	32	15	16	9
36	56	28	42	20	28	12	14
72	18	54	14	36	10	18	6

1 2 3 4 5 6 7 8 9



Tic-Tac-Toe Sums

You Need

- two players
- two markers for the bottom row of addends (for example, paper clips)
- Two sets of different markers for each player to cover each sum (for example, pennies and nickels)
- Tic-Tac-Toe Sums Game Sheet

How to Play

Player X selects two addends from the bottom of the page by placing markers on two of the numbers (0–12) to add. Placing a marker on the grid covers the sum.

Player O may move only one addend marker to make a new sum and cover it on the grid. The markers can both be on the same number.

Players alternate moving one marker at a time and continue placing their markers until a player has marked four sums in a row. Then, the players should discuss their strategies.

This game is a great way to practice and build fluency in single and double-digit addition.

Tic-Tac-Toe Sums

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
13	14	15	16	17	18
4	19	5	20	6	21

1 2 3 4 5 6 7 8 9 10 11 12



Get to Zero

You Will Need

- two or three players
- three dice
- paper and pencil

How to Play

First, on a sheet of paper, each player needs to write the players' names and the number 999 under them.

A player rolls the three dice, then arranges the three numbers (for example, 2, 3, 5) in some order (for example, 235, 352, 532, and so on) and subtracts that 3-digit number from 999. The other players also should subtract as a check.

The players take turns, rolling the die to make their special number and continuing to subtract.

The winner is the first player to reach 0, but they must get to 0 exactly.

At any time, a player may choose to roll only one or two dice, instead of three dice. If the only numbers a player can make are larger than his remaining score, the player loses his turn.

Pig

You Will Need

- two or more players
- two dice

How to Play

The goal is to be the first player to reach 100. On your turn, roll the dice and determine the sum. You can either stop and record that sum or continue rolling and add the new sums together. Roll the pair of dice as many times as you choose. Again, when you decide to stop, record the current total for your score (and add it to your previous score).

But beware! If you roll a 1 on exactly one die, your turn ends and 0 is your recorded score for that turn. And, if you roll double 1s, your turn ends and your entire score is set back to 0.



Shut the Box

You will need

- one or more players
- 2 dice
- paper and pencil

How to Play

Write the numbers 1 through 9 in a horizontal row on the paper. Player 1 rolls the dice and calculates the sum of the two numbers. Player 1 then chooses to cross out numbers that have the same sum as what was calculated from the dice roll. If the numbers 7, 8 and 9 are all covered, player 1 may choose to roll one or two dice. If any of these numbers are still uncovered, the player must use both dice. Player 1 continues rolling dice, calculating the sum and crossing out numbers until they can no longer continue. If all numbers are crossed out the player say's "shut the box". If not all numbers are crossed out player 1 determines the sum of the numbers that are not crossed out and that is their score. If "shut the box" is achieved, player 1 records a score of "0".

Player two writes the numbers 1 through 9 and follows the same rules as player 1. The player with the lowest score wins.

Variation

Player 1 and 2 can choose to play 5 rounds, totaling their score at the end of each round. The player with the lowest total score wins the game.



Race to One Hundred

You will need

- Two players
- Two dice
- Two hundred's chart
- Two markers
- Pencil

How to play

Each player takes turns rolling the two dice. Player 1 may choose to calculate the sum, difference, product or quotient of the two numbers displayed on the dice. Player 1 then moves their marker to that number on the chart. Player 2 takes their turn. For player 1's second turn they determine the sum, difference, product or quotient. This number is then added to the number under their marker and the marker is moved to this sum. Play ends when one player reaches one hundred. If a player rolls and computes a number that cannot be added to the last number without going over 100 they lose their turn. If player 1 reaches 100 first, player 2 finishes the round to see if they can tie the game.

Variation

Players can choose to include negative number achieved through taking the difference of two numbers where the number subtracted is greater than the starting number.

Race to One Hundred

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Bowl-a-Fact

**You Need**

- a partner
- one die
- paper and pencil

How to Play

Draw 10 circles in the same placement as bowling pins and write the numbers 1–10 in the circles as shown.

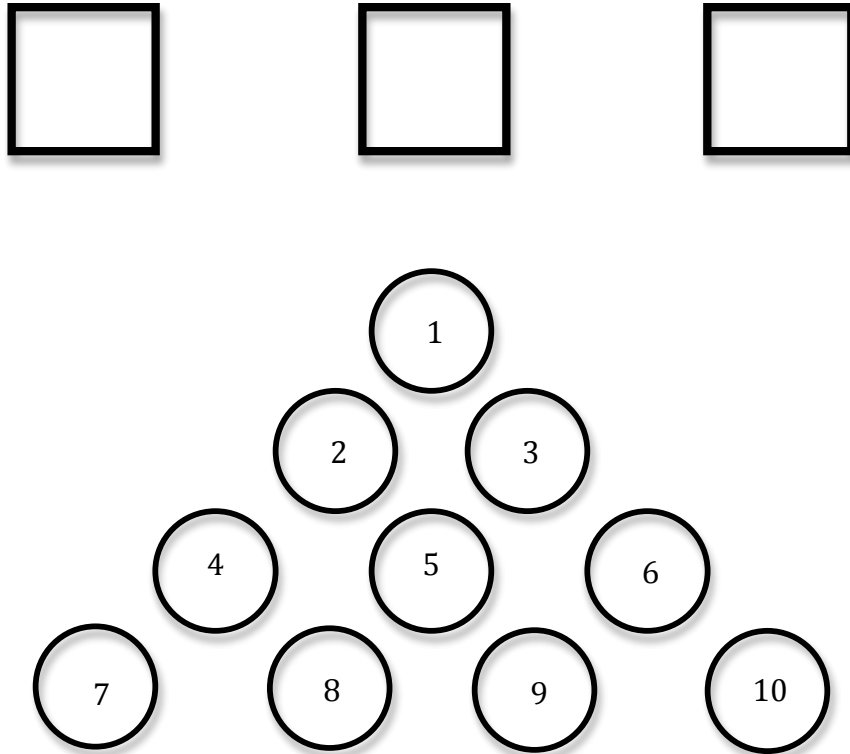
Roll a die three times and record the digits. Work with your partner to write number sentences (using only those three digits) that equal as many of the numbers 1 through 10 as possible. Record each number sentence and cross out the corresponding answer (that is, the bowling pin).

Can you eliminate each of the ten numbers for a strike? If not, roll the die three more times and use those new digits to produce number sentences. Can you get a spare?

Variation

Each player has their own set of 10 bowling pins. Each player rolls the die three times and records their numbers. Both players write number sentences to see who can knock down the most pins.

wl-a-Fact



$$1 = _ + _ + _$$

$$2 = _ + _ + _$$

$$3 = _ + _ + _$$

$$4 = _ + _ + _$$

$$5 = _ + _ + _$$

$$6 = _ + _ + _$$

$$7 = _ + _ + _$$

$$8 = _ + _ + _$$

$$9 = _ + _ + _$$

$$10 = _ + _ + _$$