



Maths Dice Games for 7+

Multiply Fly! - For 2 or more players

Materials:

Several standard dice
A Multiplication Square

How to Play:

Start with two dice and let the first player throw the dice and multiply the two numbers together until an error is made. Then the dice move to the next player. Gradually increase the number of die used.

To cover all the Times Tables you will need 4 dice. Roll 2 and add them together. Roll the other 2; add these together, then multiply the two numbers formed.

Divide and Conquer! - For 2 or more players

Materials:

Paper and pencil for each player
6 standard dice

How to Play:

The leader rolls up to six dice at once. Players try to add up the dots and be the first to call out the total. Now everyone writes the number as their dividend. The leader then throws one die. The players try to divide the last into the dividend. The first to call out the correct answer wins and gets to roll the dice for the next problem.

The Game of Pig – For 2 or more players

Math concepts: practice with mental addition and experience with thinking strategically. The object: to be the first to score 100 points or more.

Materials:

2 standard dice.

How to Play:

Players take turns rolling two dice and following these rules:

- On a turn, a player may roll the dice as many times as wanted, 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.
- 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.
- 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.

A - Ten – Tion – For 2 or more players

Math concepts: place value—numbers to 100 and understanding of odd/even.

Materials:

playing cards Ace (=1) through 9
1 or more standard die
paper and pencil

How to Play:

Each player takes two cards from the deck and uses them to create a 2-digit number between 11 and 99. Players say aloud the number they create.

Player 1 rolls the die to determine who will win 10 points for the round.

If the die lands on an odd number (1, 3, 5), the player who created the *lower* 2-digit number wins 10 points. If the die lands on an even number (2, 4, 6), the player who created the *higher* 2-digit number wins 10 points.

Players continue building numbers and alternating the roll of the die. The first player to accumulate 100 points is the winner. Two dice may be used; add them together before determining if the roll is odd or even.



Target Number – For 9+

Materials:

Two 12-sided dice (or one 12-sided Double Dice), and three standard 6-sided dice.

How to Play:

- 1) To start, one player rolls the two 12 sided dice. A “Target Number” is then established as the result of multiplying these two numbers together.
- 2) Now, the other player rolls the three 6 sided “Scoring” dice. Using each of the numbers on the dice once and only once, and combining them using any combination of addition, subtraction, multiplication, division, roots, and/or powers, players calculate results that come as close as they can to the target number.
- 3) The player who calculates a result that comes closest to the Target Number wins that point. The winning result may be above the Target Number, below the Target Number, or may hit it exactly.

Rule Specifics:

The Target Number must be established, and agreed on, before the Scoring dice are rolled. The Scoring Dice must be rolled so that they are immediately and equally visible to each player.

Each player is free to call out a number that they believe is the closest one to the target – which can include hitting the target exactly. The first player to call out a number establishes this as the baseline Scoring Number. If no one calls out a number within 30 seconds, the round is a draw and players roll again.

Once the first player calls out a number that he/she thinks is closest, he cannot have another go until the second player has had his turn.

The second player seeks to calculate a number that is closer to the target than the first player.

This process goes back and forth until one player hits the Target number exactly, the other player forfeits the point, or the 15 second time limit for calculating is reached.

Once a closest (or exact match) calculation has been made, the player who gave this answer must state their calculation to their opponent. A correct calculation gains a point; if the player can't offer a calculation for their answer, they LOSE a point.

If both players call out the same number at the same time, then the game goes on for an additional 15 seconds for either player to come up with a closer answer. If neither player has a closer answer (or if players got the target number on the first try), a tie is declared and players roll again. Neither player gets a point.

If the players have come up with answers that are equally distant from the target number, one higher and one lower, the lower number is judged to be the winner. For example, if the target is 25 and players come up with answers of 20 and 30 respectively, the player who calculated "20" is the winner.

Percentages are permitted, and they turn out to be a good strategy. If the target is 7, one player has 6 and the other player has 7.75, then 7.75 is the winner.

For fractions, players can express their answers as integers plus fractions rather than converting entirely to decimal. For example, $7 / (5+3)$ can be expressed as "seven eighths". If the target is one, $\frac{7}{8}$ beats $\frac{2}{3}$.

Roots are allowed. While most students won't use them, they can be a powerful strategy. If one student comes up with an answer like "three plus the cube root of five", and another comes up with "four and two fifths", you may have to bring in a judge to decide on the winner! However, both answers are acceptable expressions of what the numbers can be.