

Amazing Math Games III

Whether they involve adding, dividing, multiplying, or working with fractions, these creative games will engage your child in learning fun!

Make 25!

Using mental math and strategic thinking, be the last player to add to 25.



You'll need: 36 slips of paper, pencil

1. Number 20 slips of paper 1–20, and label the other 16 slips 1–16. Lay them faceup.
2. The first player adds two or more of the numbers together to equal 25 and picks up the numbers she used (say, $9 + 16$ or $3 + 2 + 20$).
3. Take turns coming up with combinations of numbers to equal 25 from the remaining numbers, taking them as you go. When no more possible combinations exist, the last player who made 25 wins.

Variation: Include more numbers. Allow subtraction, multiplication, or division. Or choose a different target number.

Multiplying marbles

Shoot marbles onto a bull's-eye, and watch how quickly your score multiplies.

You'll need: sidewalk chalk or paper and pencil, marbles

1. On a sidewalk or paper, draw a large target with 5 circles. Label the center "x 10" (times 10), the remaining circles moving outward "x 7," "x 6," "x 4," and "x 3," and the space outside the circles "x 2."
2. Have each player select 10 marbles that he can identify as his. *Tip:* If they look too much alike, mark the marbles with different-colored dots using permanent markers or nail polish.
3. From a designated starting spot, take turns shooting or rolling marbles into the target. When each player has rolled 10 marbles, he counts how many of his marbles ended up in each area and multiplies that number by the multiplier from that circle. He then adds the products together to get his score. For instance, if a player has 3 marbles in "x 7," 2 in "x 4," 3 in "x 3," and 2 outside the circles, he would multiply:

$$3 \times 7 = 21$$

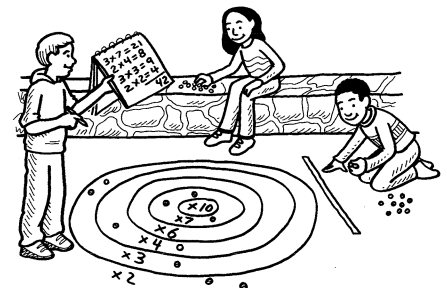
$$2 \times 4 = 8$$

$$3 \times 3 = 9$$

$$2 \times 2 = 4$$

His score would be 42 ($21 + 8 + 9 + 4 = 42$).

4. High score wins.



continued

Divide and recycle

Gathering the leftover blocks for “recycling” is a fun way to practice division skills, with and without remainders.

You’ll need: die, 6 bowls, 20 blocks

1. The first player rolls the die and takes that number of bowls (roll 3, and get 3 bowls). He then divvies up the 20 blocks equally into the bowls, putting aside any remainder. *Example:* Put 6 blocks into each of the 3 bowls ($6 \times 3 = 18$). The 2 blocks left over go into his “recycling” pile and are his to keep.
2. The next player collects the 18 blocks from the bowls and rolls the die to divide them up again. If he rolls a 5, he takes 5 bowls and divides the 18 blocks, 3 per bowl, with 3 left for his recycling pile. Then, the first player removes the 15 blocks now in the bowls (and therefore still in play) and takes his turn. *Note:* If the blocks divide evenly with no remainder, the player collects no blocks.



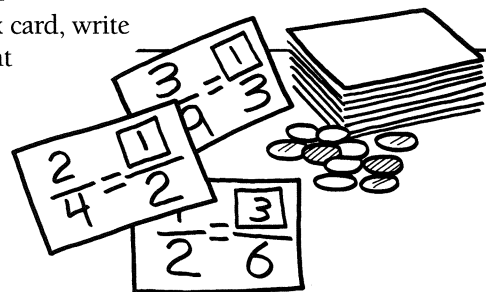
3. Continue playing until fewer than 6 blocks remain. The person with the most blocks to recycle wins the game.

What number’s on top?

Collect tokens to equal the missing numerator—and win this game of equivalent fractions.

You’ll need: 20 index cards, pencil, 30 tokens (bingo chips, pennies) for each player

1. On each index card, write a set of equivalent fractions—but replace one numerator (top number) with a box (for example, $\frac{1}{2} = \frac{\square}{6}$ or $\frac{\square}{3} = \frac{6}{9}$). Stack the cards facedown.



2. Put all the tokens in the middle of the table.
3. On each turn, draw a card, determine the value that goes inside the box, and collect that number of tokens. If you pick $\frac{2}{4} = \frac{\square}{2}$, you get 1 token (because $\frac{2}{4} = \frac{1}{2}$).
4. The first one to collect 30 tokens wins. (If all the cards get used first, reshuffle and restack them.)

Variation: Make four more index cards with equivalent fractions. Label each one “Give back,” and make sure the value in the box will be 1, 2, or 3 (“Give back $\frac{\square}{5} = \frac{2}{10}$ ”). When these cards are drawn, the player figures out the numerator and has to return that number of tokens to the pile. For instance, draw “Give back $\frac{\square}{5} = \frac{2}{10}$,” and return 1 token because $\frac{1}{5} = \frac{2}{10}$.

Diving for decimals

Perform fancy dives like an Olympian—then based on “judges’ scores” and the degree of difficulty, see who wins the meet.

You’ll need: paper, scissors, pencil, bag, “diver” (an action figure),

1. Cut 17 pieces of paper, and write a score on each one (2.0, 2.5, 3.0, 3.5, through 10.0). Mix the slips in the bag.
2. The first-round dive is worth a 1.3 degree of difficulty. Take turns using the diver to “perform” an amazing dive.
3. To see your score, draw 5 judges’ scores from the bag. As in real diving competitions, throw out the highest and lowest scores, add the remaining numbers, and multiply the total by the degree of difficulty. If your youngster got 9.5, 7.0, 5.0, 10.0, and 8.0, she would drop 5.0 and 10.0. The remaining scores total 24.5 ($9.5 + 7.0 + 8.0 = 24.5$), and she would

multiply $24.5 \times 1.3 = 31.85$ for her final score. Put the papers back in the bag so the other players can complete their first dives and calculate their scores.

4. All players then perform a second dive with a degree of difficulty of 2.4.

5. A third and final round of dives is worth a 3.2 degree of difficulty. After totaling scores for this round, add up all your scores. The highest one takes home the gold!

