

# Amazing Math Games

Playing with numbers is a great way to help your youngster have fun with math and master concepts she'll need to do well in school. Use games like these to make building math skills as easy as 1-2-3!



## Product search

Multiply the numbers, and you'll multiply your chances to win.



**You'll need:** deck of cards (face cards removed, ace = 1)

1. Shuffle the cards, and lay them faceup in four equal rows.
2. The first player chooses any two cards that are touching, either side by side, top to bottom, or diagonally. She multiplies the two numbers and names the *product* (for 2 and 8, she would say, "My product is 16," because  $2 \times 8 = 16$ ). Then, she collects all the touching pairs she can find with that product (for instance, two 4s, since  $4 \times 4 = 16$ ).
3. Shuffle the remaining cards. Lay them back out in four rows (it's okay if some rows have more cards than others). Continue playing, taking turns until all the cards are used.
4. The player with the most cards wins.

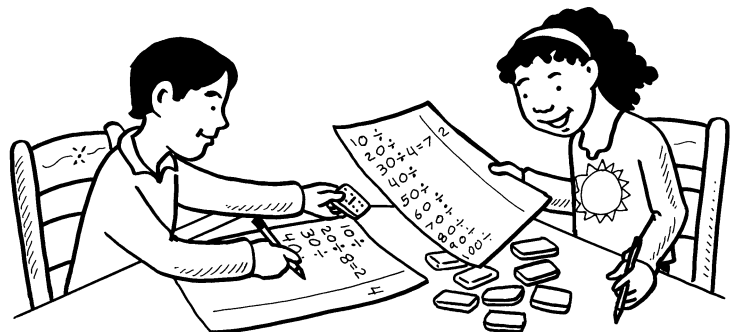
## What's left?

It's great when division problems divide equally. Yet in this game, you score by creating division problems with remainders—giving your child practice with equations that *don't* divide equally.

**You'll need:** paper, pencil, dominoes

1. On his sheet of paper, each player should list the numbers 10 to 100 by 10s (10, 20, 30...) and put a division symbol ( $\div$ ) beside each number. Place the dominoes facedown, and mix them up.
2. Have the first player choose a domino and count the total number of dots. Then, he writes that total next to any number on his sheet to make a division problem with a remainder. For instance, if his domino has 8 dots, he could put 8 by the 20 to create  $20 \div 8 = 2$ , remainder 4. The remainder (4) becomes his score for that round.
3. Take turns picking dominoes and filling in numbers until your sheets are filled. (If you can't use the domino you draw, your turn ends.)
4. Total your remainders. High score wins.

**Variation:** For more advanced players, number the papers 50 to 500 by 50s (50, 100, 150...).



continued



## Fractions of fun

Fill an egg carton fraction by fraction. But if someone swipes your carton, you'll have to start over!

**You'll need:** 23 index cards, pencil, 1 egg carton and 12 tokens (like buttons) per player

1. Label 22 index cards with one fraction each:  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{2}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$ ,  $\frac{1}{6}$ ,  $\frac{2}{6}$ ,  $\frac{3}{6}$ ,  $\frac{4}{6}$ ,  $\frac{5}{6}$ ,  $\frac{1}{12}$ ,  $\frac{2}{12}$ ,  $\frac{3}{12}$ ,  $\frac{4}{12}$ ,  $\frac{5}{12}$ ,  $\frac{6}{12}$ ,  $\frac{7}{12}$ ,  $\frac{8}{12}$ ,  $\frac{9}{12}$ ,  $\frac{10}{12}$ ,  $\frac{11}{12}$ . On the last index card, write "Trade cartons."
2. Shuffle all the cards, and place them facedown in a pile. Give each player an egg carton and 12 tokens.
3. Take turns picking the top card and filling that fraction of your carton's cups with tokens. For example, if you get a card with  $\frac{3}{4}$ , fill 9 cups ( $\frac{3}{4}$  of 12 = 9). Return the card to the bottom of the stack.
4. Draw a new card each round until you fill your carton by exact count. (Using the above example, any fraction or fractions equal to  $\frac{3}{4}$  would finish filling the carton. If you get a fraction larger than  $\frac{3}{4}$ , put it at the bottom of the pile,

and your turn ends.) If you get the "Trade cartons" card, swap cartons with any other player—and that person has to dump out his tokens and start over!

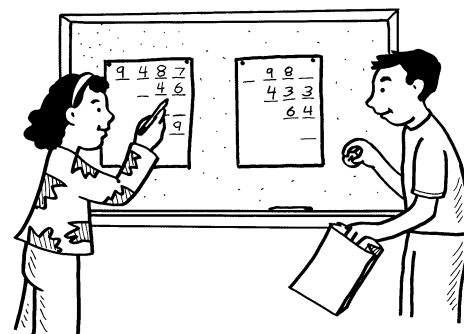
5. Score a point when you fill your carton. Then, empty it, and play again. The first player to get five points wins.

## Places, everyone!

This fill-in-the-blanks game is a fun way to work with place value and adding large numbers.

**You'll need:** 10 bottle caps, marker, paper bag, pencils, paper

1. Number the caps 0 to 9, and place them in the bag.
2. Have each person make a game board on a sheet of paper like this: Draw a row of dashes for a 4-digit number. Under that, draw dashes for a 3-digit number, a row for a 2-digit number, and finally a single dash for 1 digit.
3. Take turns picking a cap from the bag and writing that digit in any blank on your sheet. Your goal is to create four numbers that add up to the largest possible total. *Hint:* Think about the value of the digit in each space. If you draw a 4, for instance, it can be worth 4, 40, 400, or 4,000 depending on where you put it.
4. Return the cap to the bag at the end of each turn.
5. When you have filled your board, add together the four numbers you made. The highest total wins.



## Traveling math games

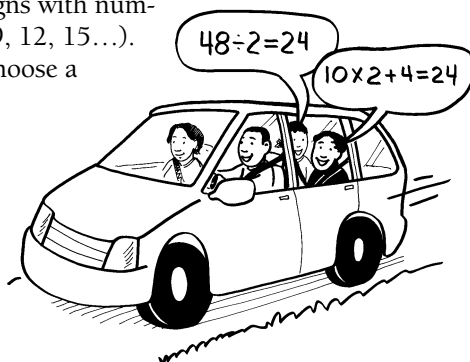
Quick games like these let you take math with you when you hit the road.

### Hunt for multiples

Pick a number from 1 to 12, and see who can spot the most of its multiples on signs that you pass. *Example:* For multiples of 3, players would hunt for signs with numbers that are evenly divisible by 3 (3, 6, 9, 12, 15...). The person who finds the most gets to choose a multiple for the return journey.

### Make an equation

Name a 2-, 3-, or 4-digit number from a sign, and take turns creating equations that equal that number. You can use as many different operations (addition, subtraction, multiplication, division) as you like. *Example:* For 24 Maple



Avenue, one child might say, "48 ÷ 2 = 24," and another could announce, "10 x 2 + 4 = 24." Write down the equations you make. Play 3 rounds, and then choose a new number.

### Fraction race

The first player chooses a passing license plate, and everyone races to make a pair of equivalent (same-size) fractions from its numbers. *Example:* Numbers from license plate 22 Z 136 could make the pairs  $\frac{1}{3}$  and  $\frac{2}{6}$ , or  $\frac{6}{12}$  and  $\frac{1}{2}$  (you can use the same number in more than one fraction). The first person to name a pair of equal fractions scores a point and chooses the next plate. When you reach your destination, the person with the highest score wins.