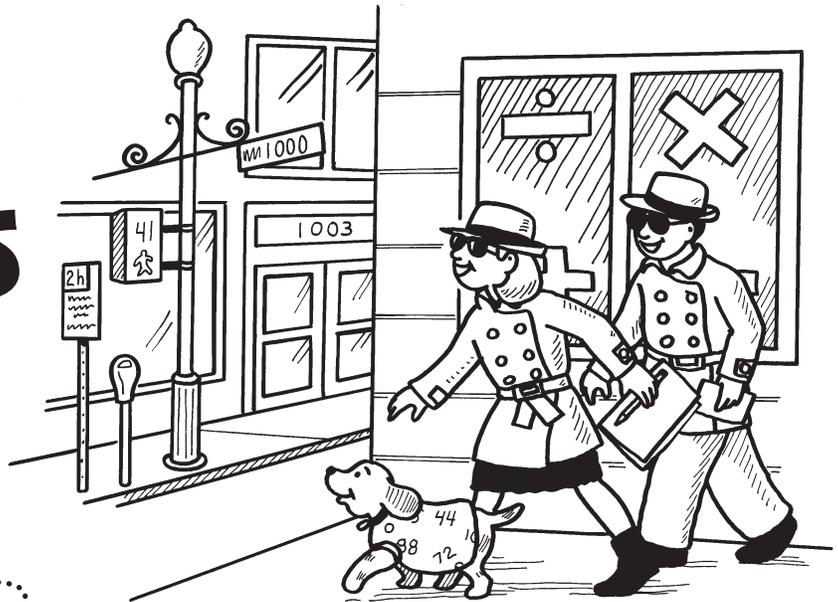


Math Detectives

Top secret: Math operations are everywhere, and children can use them to solve everyday problems. With these games and activities, they will investigate addition, subtraction, multiplication, and division—and build math sleuthing skills.



Make a meal

Your youngster's mission is to put together a balanced meal—and to correctly calculate the cost. Give him 24 index cards. Have him draw a food on one side of each card and write a price on the other. He should draw 6 main dishes, 6 fruits, 6 vegetables, and 6 beverages. For example, he might illustrate a chicken sandwich for \$2.50, a bowl of peas for \$1.25, and a glass of milk for 75 cents.



Put the cards picture sides down in a pile and take turns picking one up. The goal is to get one entree, two sides, and a drink. If he draws a card he doesn't need (say, a second entree), he puts it at the bottom of the pile, and his turn ends. When he keeps a card, he adds its price to his total. The winner is the first person to get a complete meal and correctly add the prices. *Variation:* Find the “secret combination”—compete to see who can put together the most or least expensive meal.

Race to zero

To be the first player to reach zero, your child must unlock the strategy in this game. Start by writing the number 100 at

the top of a piece of paper. The first player should subtract any number, 1–10, from 100 and write the equation underneath. For example, he could pick 5 and write, “ $100 - 5 = 95$.” The next player subtracts a new number that is 1–10 greater than the first player's number (in this example, any number from 6 to 16) and writes the new problem underneath ($95 - 16 = 79$).

Go back and forth, subtracting bigger and bigger numbers (1–10 greater than the last player's number). The player who writes a problem that equals zero wins the game.

Calendar countdown

Can your youngster solve the mystery of how many hours there are until a special family event? Use your calendar for multiplication fun. Ask her to choose a fun event that's coming up, such as her birthday, a field trip to the zoo, or a family reunion.

Then, have her count the days until the special event and multiply by 24 to calculate how many hours she has to wait. Say her birthday is in 10 days—her number sentence would be $10 \times 24 = 240$ hours. Or if she's going on a field trip in 12 days, her equation would be $12 \times 24 = 288$.



continued

Clock it!

How many number sentences are “hidden” in the time on a digital clock? Your youngster can be a math detective and find out. When you’re stopped at a red light or waiting in line at the store, use the car clock or a digital watch to help him practice addition, subtraction, multiplication, or division!

Take turns giving each other a math problem using the numbers on the clock. If it’s 4:45, you might ask, “What is $4 + 4 + 5$?” (13) Then, your youngster could ask, “What is 4×5 ?” (20) Also, play backward: “The answer is 16. What’s the problem?” ($4 \times 4 = 16$) See how many different math operations you can do with the numbers before the time changes. Once it does, your child will have a new set of numbers to play with.

S’more fun

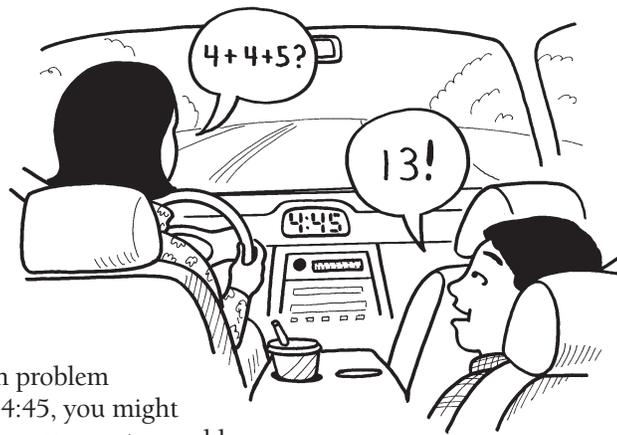
Try this snack-time division activity that lets you and your child eat the results! You will need graham crackers, mini-marshmallows, and chocolate bars.

Have each person take eight graham crackers, four chocolate squares, and a handful of marshmallows. Count your marshmallows (12), divide by 4 to find out how many there are for each s’more, and let your youngster say the equation aloud ($12 \div 4 = 3$). If any marshmallows are left over (the remainder), your child can eat them! Then, she can check her division by “dealing” out the marshmallows one at a time as she makes her s’mores. *Variation:* Play with other snacks, such as cheese and crackers or “ants on a log” (peanut butter and raisins on celery sticks). Have her come up with equations and then divide the ingredients evenly.

I spy...

Equations are the clues in this math version of “I Spy.” On your turn, make up a number sentence about something that you see. The other person has to guess what you’re looking at and solve your math problem.

For instance, you could pick 4 chairs, each with 4 legs, and say, “I spy 4×4 .” Then, have your youngster walk around the room looking for your objects—you might let him know if



he’s close (“You’re getting warm”) or far away (“Now you’re cold”). When he figures it out, he can give the answer (16) and then make up a number sentence for you. *Idea:* Ask him to think of a different problem for the same objects ($4 + 4 + 4 + 4 = 16$). This will help him understand that there is more than one way to get the same answer.

Roll a sign

Your child can investigate all four operations—addition, subtraction, multiplication, and division—with this game. She will need a die and a deck of cards. First, have her put a small square of masking tape on each side of the die. Write a different math symbol (+, −, ×, and ÷) on four sides. On the two remaining sides, put a question mark. Then, remove face cards and jokers from the deck, and put the rest of the cards facedown in a pile.

To play, take turns rolling the die and drawing two cards. Solve a problem using the two numbers you drew and the symbol on the die. For instance, if you roll a subtraction sign and draw a 9 and a 5, you would say, “ $9 - 5 = 4$.” If you roll a question mark, you can choose any type of math operation you want. When you solve a problem correctly, keep the cards. After you’ve drawn all the cards, the player with the most cards wins.

What’s my number?

Let your youngster use addition, subtraction, multiplication, and division to solve the mystery of which number is on her back. First, have each person secretly write a number between 1 and 10 on an index card and tape it to any other player’s back.

Take turns saying equations to figure out what number is on your own back. The equation must include addition, subtraction, multiplication, or division, and each person can use each operation only once. For example, your youngster might say, “ 4×2 .” You tell her whether the number on her back is higher or lower than, or equal to, the answer to the equation. So if your child has a 7 on her back, you would say, “Lower,” because $4 \times 2 = 8$, and 7 is less than 8. When everyone has figured out their numbers, play again with new ones.

