

What's My Strategy?

Math problems may have one correct answer, but there's more than one way to find that solution. Let your youngster explore these strategies to see which ones work best in different situations.

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Strategy #1: Use objects

Matching up objects with numbers is a great way for your child to see what's happening in a math problem. Have him gather 50–100 small items like cereal pieces or paper clips.

Then, he can use those objects to show his homework problems. For instance, if he has to solve $48 \div 6$, he could divide 48 cereal pieces evenly into 6 piles. The answer (*quotient*) would be the number of pieces in each pile (8). Or he might make groups of 6 pieces each. He'll keep making piles of 6 until all 48 pieces are used—the quotient would be the number of groups (8). *Idea:* Ask your youngster which multiplication problems he just demonstrated ($6 \times 8 = 48$ and $8 \times 6 = 48$). Or what if the pieces don't divide evenly? Say his problem is $49 \div 6$. He'll find he has one cereal piece left over—or a remainder of 1.

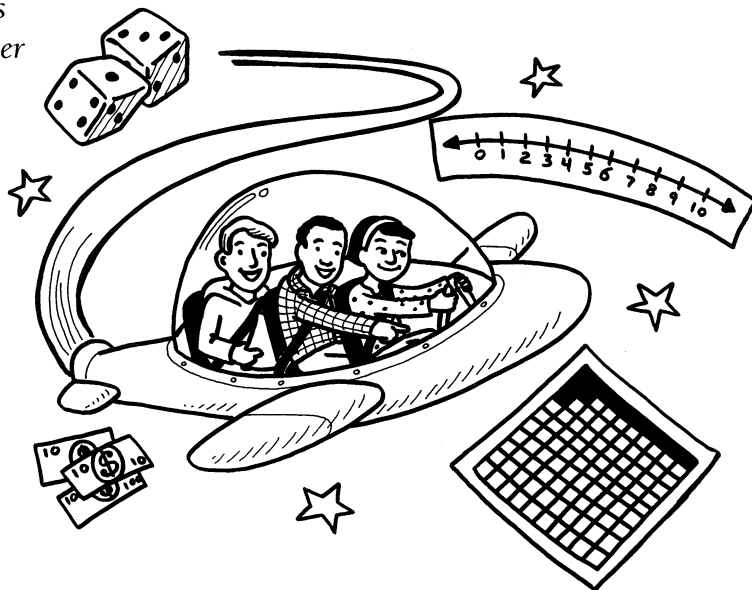
Strategy #2: Act it out



Suggest that your child act out story problems to help her understand the math. Here's an example:

"Julie works at a hardware store. One Saturday, Kim came in to buy a lawn mower that cost \$278. She gave the cashier \$300. What change should she get back?"

Your youngster can set up a store and act out the problem with play money. She might practice swapping a \$100 bill for 10 \$10 bills and a \$10 bill for 10 \$1 bills. This is a great way to visualize math using place value.

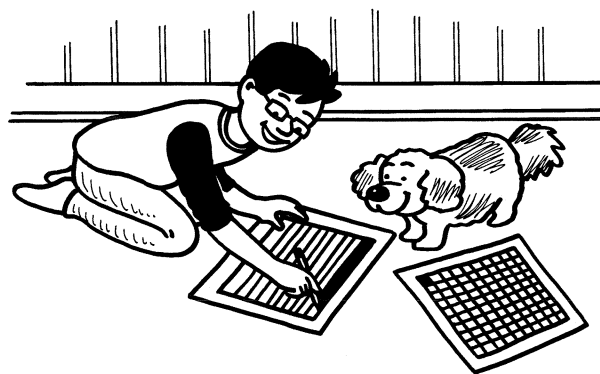


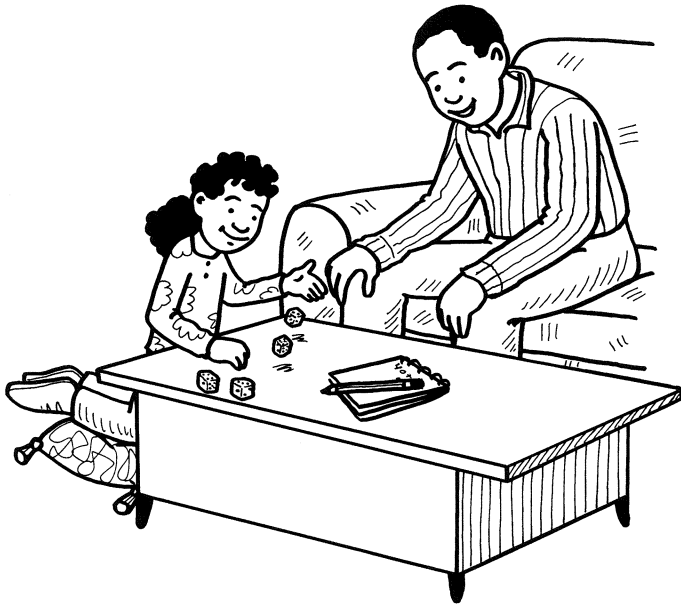
Strategy #3: Draw a picture

The difference between 0.1 and 0.01 may not seem like much to your child, but when he draws it, the difference will be obvious.

Start by having him draw two large boxes that are the same size and dividing each box into 10 equal rows. In one box he should shade one row. This represents 0.1 ($\frac{1}{10}$). For the second box, ask him to divide it further into 10 equal columns. That will make 100 small squares. What happens if he shades one square in that box? He will illustrate 0.01 ($\frac{1}{100}$). Now, at a glance, he'll see that 0.1 is way more than 0.01.

You can encourage your youngster to apply the "draw a picture" strategy to all sorts of math problems. For instance, he could sketch the elements of a word problem to help him understand what is being asked and to illustrate the steps.





Strategy #4: Estimate to justify

With four dice and paper and pencil, your child is ready to practice estimating. Have her roll two dice to form a number (3 and 4 could be 34 or 43), while you roll the other two dice to make another number.

Announce your numbers, and ask her to estimate the sum. If the numbers are 43 and 62, she might think, “40 + 60 = 100” and estimate the answer at 100. Meanwhile, you figure out the actual sum ($43 + 62 = 105$). If her estimate is close to your sum, she can assume your answer is probably right since estimates help predict solutions. Suggest you both roll again, except let her figure the sum while you estimate. With just a few tries, your youngster will realize the value of estimating to check if her answer makes sense.

Strategy #5: Put it on the line

Number lines are a handy tool for understanding number relationships. To make a number line, your child should draw a line and add tick marks for each number—say 1–20—and label 0, 5, 10, 15, and 20.

Then, take turns demonstrating a number pattern for the other person to guess. For instance, you might start at 0 and draw an arc to 2, another arc from 2 to 4, then another arc from 4 to 6, and so on. He would guess your pattern is + 2. Now, see if you can guess a pattern he creates. Some suggestions are:

- $\times 2$ (1, 2, 4, 8, 16)
- $+ 4$ (0, 4, 8, 12, 16)
- a two-step pattern like $+ 5, - 1$ (0, 5, 4, 9, 8)

Strategy #6: Number sentences

Your youngster and her friends will have a “blast” with this approach. Give each child a blown-up balloon and a permanent marker. Call out a math problem, such as 12×5 , and set a timer for 3 minutes. Using the marker, each person should write all the number sentences she can think of that would solve the problem.

Examples:

- $12 \times 5 = 60$
- $12 + 12 + 12 + 12 + 12 = 60$
- $(10 \times 5) + (2 \times 5) = 60$
- $12 \times 10 = 120$ and $120 \div 2 = 60$

When 3 minutes are up, let them swap balloons to check each other's answers. Then they get to pop the balloons!

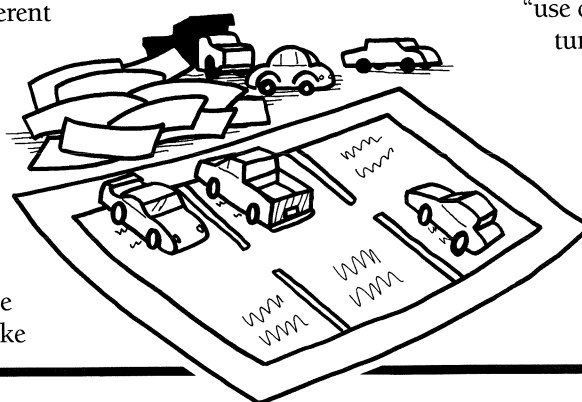


Putting it all together: Where should I park?

Make a game out of using all the different math strategies your child is learning.

First, have him write 20 addition, subtraction, multiplication, or division problems on separate slips of paper. Examples: $399 + 73 = \underline{\quad}$, $4 \times 72 = \underline{\quad}$.

Then, each player gets 6 toy cars and draws a 6-space parking lot on a sheet of paper. In every parking spot, the player writes a different math strategy like



“use objects,” “act it out,” “draw pictures,” or any of the other strategies.

Turn the math-problem slips facedown. Now take turns picking one and using one of your strategies to figure out the problem. Solve it correctly, and you get to park a car on that strategy. The winner is the first person to fill up his parking lot.