

Keys to Math Fluency

Playtime, snack time, story time... it's always a good time to work on math fluency. A youngster who's fluent in math thinks about numbers in different ways and uses various strategies to solve problems. Plus, he can explain his strategies, which shows he understands the "why" behind math operations. Try these activities that will fit "fluently" into your child's daily routines.



Playtime

Whether your youngster counts blocks or rocks, he can practice counting fluently as he plays. First, ask him to make the tallest building possible by placing one block on top of another, counting as he builds. Next, go outdoors, and let him fill up his dump truck with rocks. Now he gets to dump it out and count the rocks. How could he fit in more rocks? (He'd need to find smaller ones!)

Snack time



Here's a fluency-builder that tastes yummy! Choose a snack with small pieces, such as raisins, cereal rings, or blueberries. Arrange a handful (say, 12 blueberries) in two groups on your plate (maybe 8 on one side and 4 on the other), and say the number sentence you made ($8 + 4 = 12$). Let your child take the same number of snacks and show the number

in a different way (perhaps $5 + 7$). *Idea:* Turn your plates around and say the number sentences ($4 + 8 = 12$, $7 + 5 = 12$). She'll see that the total is still the same. That's the *commutative property* of addition—add numbers in any order, and the sum will be the same.

On-the-go time

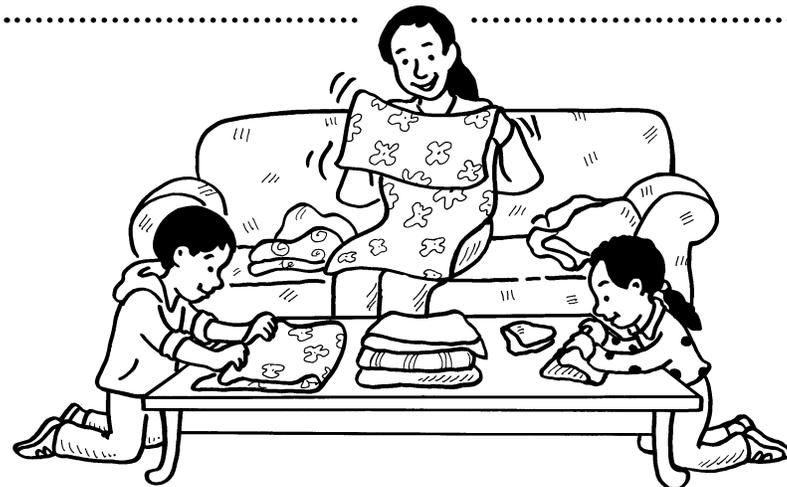
How is 17 related to 18? They're "neighbors," because 17 is *one less than* 18, and 18 is *one more than* 17! Spotting relationships between numbers helps your youngster solve math problems fluently. In the car or on a walk, work on "neighborly numbers." Point out a number, and ask him to tell you its neighbor. If you pick 35 on a speed limit sign, he would say that 34 and 36 are its "neighbors." *Variation:* Have him tell you which number is 10 less (25) and 10 more (45). *Note:* At first, he may need to start counting at 1 to figure out a number's neighbor. As he becomes more fluent, he'll be able to answer automatically.



continued

Story time

Read aloud to your child, and make up math stories related to the book for each other to solve. If you read *Jack and the Beanstalk*, you might say, “Jack had 25 beans. He spilled 8 of them. How many beans did he have left?” ($25 - 8 = 17$) Then, talk about the strategy used to solve the problem. Your youngster could say, “ $25 - 5 = 20$. 8 is 3 more than 5, and $20 - 3 = 17$.” A different strategy would be working up from 8 to 25 using numbers that are easy to add. (“ $8 + 2 = 10$, $10 + 10 = 20$, and $20 + 5 = 25$. Then $2 + 10 + 5 = 17$.”) She’ll learn to approach problems in multiple ways and see that more than one strategy leads to the answer.



Chore time

Doing household chores is a great way for your child to practice estimating accurately—an important part of math fluency. Have him get the towels out of the dryer and estimate how many there are, then count to check. He can also estimate the number of napkins in a stack before he sets the table or the number of boxes in the recycling bin before he helps you take it out. If he estimates frequently, he’ll learn to eyeball different quantities, and his estimates will become more accurate.

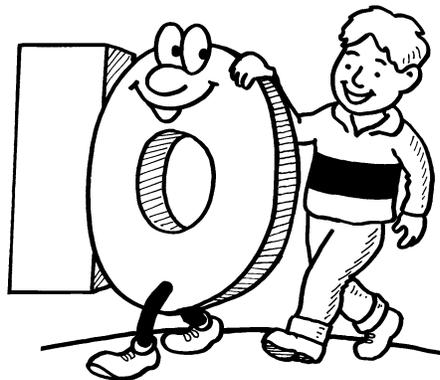
The friendliest number

The “friendly” number 10 can help your youngster add and subtract fluently, because our number system is based on 10. Here are ideas for working with 10 and its multiples (20, 30, 40, and so on).

Make a chart

With this colorful chart, your child will see all the ways to make 10. On a large sheet of paper or poster board, have him write the numbers 0–10 across the top and 10–0 across the bottom.

Using different-color crayons, let him draw lines connecting the pairs of numbers that make 10 (0 and 10, 1 and 9, 2 and 8, 3 and 7, 4 and 6, 5 and 5). Then, he can write the number sentences for each pair ($1 + 9 = 10$, $2 + 8 = 10$). Suggest that he hang his chart in his room, and he’ll soon be fluent in making 10.



Play a game

Now let your youngster use what she knows about facts from 1 to 10 to add and subtract bigger numbers. Each person should make a game board by dividing a piece of paper into 4 rows and 4 columns. In each square, a player writes any two-digit number that does not end in 0 (examples: 12, 53, 38, 21).

Take turns rolling either one die or two dice (your choice). If the number rolled can be added to or subtracted from a number on your board to make a multiple of 10, cover that number with a token. (Place only one token per turn). Perhaps your child rolls a 2. She knows that $8 + 2 = 10$, so she could put a token on 38, because $38 + 2 = 40$, and 40 is a multiple of 10. The first person to fill her board wins.