

1

Encourage children to play math puzzles and games. Award winning mathematician, Sarah Flannery reported that her math achievement and enthusiasm came not from school but from the puzzles she was given to solve at home. Puzzles and games – anything with a dice really – will help kids enjoy math, and develop number sense, which is critically important.

2

Always be encouraging and never tell kids they are wrong when they are working on math problems. Instead find the logic in their thinking – there is always some logic to what they say. For example if your child multiplies 3 by 4 and gets 7, say – Oh I see what you are thinking, you are using what you know about addition to add 3 and 4, when we multiply we have 4 groups of 3...

3

Never share with your children the idea that you were bad at math at school or you dislike it – especially if you are a mother. Researchers found that as soon as mothers shared that idea with their daughters, their daughter's achievement went down.

4

Encourage number sense. What separates high and low achievers is number sense – having an idea of the size of numbers and being able to separate and combine numbers flexibly. For example, when working out $29 + 56$, if you take one from the 56 and make it $30 + 55$, it is much easier to work out. The flexibility to work with numbers in this way is what is called number sense and it is very important.

5

When working with students on their math facts, work on strategies and not rote memorization. Teachers in younger grades will share which strategies they are working on with the students, and those will be good to reinforce at home. Don't worry about speed, it is much more important that children have an understanding of how to work with numbers and solve for simple equations mentally, than students just memorizing facts that don't mean anything to them.

6

Perhaps most important of all – encourage a “growth mindset.” Let students know that they have unlimited math potential and that being good at math is all about working hard. When children have a growth mindset, they do well with challenges and do better in school overall. When children have a fixed mindset and they encounter difficult work, they often conclude that they are not “a math person”. One way in which parents encourage a fixed mindset is by telling their children they are “smart” when they do something well. That seems like a nice thing to do, but it sets children up for difficulties later, as when kids fail at something they will inevitably conclude that they aren't smart after all. Instead use growth praise such as “it is great that you have learned that”, “I really like your thinking about that”. When they tell you something is hard for them, or they have made a mistake, tell them: “That's wonderful, your brain is growing!”