

# The Importance of Memorizing the Times Tables



By Susan Jarema, Googol Learning

We all know that learning multiplication is an essential part of our child's elementary education. Students who have mastered multiplication gain a solid foundation in mathematics that will help them throughout middle school, high school and beyond. The following are the answer to common questions that parents ask in my multiplication workshops.

## 1. Why does my child need to memorize the times tables?

Just like learning to walk before you can run, learning multiplication and memorizing the times tables are building blocks for other math topics taught in school – higher learning such as division, long multiplication, fractions and algebra. Students who have not memorized the times tables will find these levels of math much more difficult than they need to be. There is no time to pull out a calculator or to take 20 seconds to work out a math strategy before coming up with the answer. Students who have not mastered their tables will very often fall behind in math (and other subjects that use math) and begin to lose confidence. All because they did not memorize the times tables!

Knowing your multiplication facts is helpful not only in academics; we frequently use multiplication in our daily lives. We might need it when doubling a recipe, determining a discount at a store or figuring out our expected arrival time when traveling. Math calculations are subconscious elements in work, play and daily chores. Knowing the times tables can help simple tasks to be performed rapidly and save time and stress.

### **How Parents Can Help Their Child Memorize the Times Tables**

1. Make sure there is understanding.
2. Explain why it is important.
3. Demonstrate what fast recall is.
4. Be interested in math yourself.
5. Find out what facts they already know.
6. Involve your child in the goal setting process.
7. Focus primarily on the facts they need to learn.
8. Use a chart to monitor progress.
9. Provide encouragement along the way.
10. Spend quality time together practicing.
11. Acknowledge their success.
12. And most importantly: Have fun!

## 2. Why can't they just use a calculator?

Calculators are great tools for figuring out complex calculations. However, using a calculator takes much longer for simple facts and can result in keying errors. Students who rely on calculators are also weak in estimating skills and are unaware of wrong answers that occur from keying mistakes. Furthermore, calculators are not allowed in many tests and admission exams.

## 3. What is more important understanding or memorization and how can I help with both?

It's not one or the other, it's both. A child must understand and memorize the facts. Early on, a student needs to understand what multiplication is – the grouping of sets, repeated addition, a faster way of adding. Show them this with an assortment of manipulatives, by skip counting and by using arrays. As they master the basics, expand upon this concept by creating interesting word problems. Allow them to discover the patterns in the numbers by exploring a 100s chart, skip-counting tables and the times table chart. This is the time that they can discover multiplication strategies. However, there eventually comes a time when we need to highlight the importance of rapid recall. Students need to know that they should recall the answer instantaneously. Demonstrate the speed of this by having them quiz you and by practicing together.

Memorizing can be facilitated by concentrating, rehearsal and memorization techniques. Remember to focus your limited time on the facts that need to be learned. By removing the facts they already know and by learning the reciprocal facts together (i.e.,  $6 \times 7$  and  $7 \times 6$ ), there are surprisingly few left to memorize. Review all facts occasionally to make sure they have been retained in long-term memory. Music, stories and visual associations can help with retention.

In some cases, an inability to memorize may suggest learning difficulties. If your child is consistently having trouble memorizing math facts or other elements of learning, it's a good idea to research learning challenges or disabilities and seek medical advice. Negative emotions such as anxiety, stress and conflict can also reduce learning outcomes and even prevent new information from being memorized. Encourage and support your child rather than getting frustrated and angry when they have difficulty. Remove distractions and create a comfortable and pleasant learning environment. Involve your child in choosing his or her own practice schedule.

The boring task of memorization can be made more fun through music, games and activities that reinforce repetition of the math facts. Working with your child to complete this goal can be a bonding time as you play games and sing songs. You will also have the opportunity to help them learn the important life skills of memorization and goal setting.

Have fun together in this process. It's always a good review and opportunity for the whole family to exercise their brains. Even if 144 facts is a gross - memorization need not be gross!

Susan Jarema is the founder of Googol Learning, the Crazy 4 Math Contest, TVvgFREE.com, and Kidzinfo. The Googol Learning Website has many free resources to inspire mathematics and family learning in your home through music, games, stories and layered learning.

Visit [www.googolpower.com](http://www.googolpower.com) for more.