

# Overcome Dyscalculia



*Being unable to learn the times tables is a common symptom of dyscalculia. Fortunately, there are a few things you can do if this occurs.*

## What is Dyscalculia and How Does It Affect Math?

Dyscalculia is a learning disability that can affect a person's ability to do well in math. A large reason for this struggle is due to an inability to rote learn math facts. Rote learning is a memorization strategy that focuses on repeating the same thing over and over again. You may have used rote learning in the past when you practiced lines in a play, memorized a phone number, or learned the periodic table.

Rote learning is also a primary method of teaching multiplication and division facts. While it is definitely a successful strategy for some, others, including those with dyscalculia, may suffer. The good news is that rote learning isn't the only option. In this article, you will receive a few tips on how to teach the multiplication and division facts without the need for rote memorization.

## Tip 1. Use a Multi-Sensory Approach

- *"Explain and show why. Don't Rely on, 'do it like this'. – Steve Chin, Learning Disabilities Author*
- *"Numerous studies have shown that multisensory math instruction is good for all learners." – Understood.org*

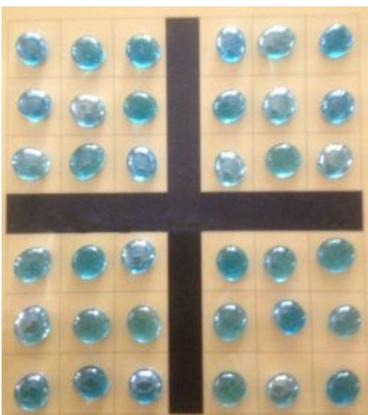
Teachers and parents have found that those with dyscalculia are more likely to succeed through a multi-sensory approach. This approach uses more senses (such as sight, hearing, speech and touch) to teach a concept.



**Technique – Use Arrays and Counters** – Arrays are a great multi-sensory tool that work well when teaching math facts. Teaching with arrays is easy to do, and learning is much more efficient.

When using arrays it's important to use counters. Counters provide a better multi-sensory experience. There are plenty of items you can use as counters. Some examples are beans, pennies, and bingo chips.

When using an array, be sure to begin with a small fact (such as  $3 \times 3$ ). Large facts (such as  $3 \times 6$  or  $6 \times 6$ ) are taught through doubling. This can easily be done on an array by doubling sections.



A collection of arrays designed to teach these facts are provided on our [worksheets page](#). These worksheets are free to print and use.

## Tip 2. Use Stories

- *"Work on finding different ways to approach math facts" – National Center for Learning Disabilities*
- *"For multiplication and division facts, Times Tales works like a charm. – Susan Barton, Dyslexia Specialist*

While using arrays will work for most people with dyscalculia, it will not work for all. Another excellent option for teaching multiplication facts is to use stories. Multiplication stories teach facts through a story the person can easily remember. Many parents and professionals have found great success using this approach. However, some critics have claimed that using stories can limit a person's recall speed.

**Option 1 – Times Tales** – Times Tales is one alternative for learning multiplication facts. Many people have found success with this program. Times Tales focuses on the most difficult facts. These include  $3 \times 6$ ,  $3 \times 7$ ,  $3 \times 8$ ,  $3 \times 9$ ,  $4 \times 6$ ,  $4 \times 7$ ,  $4 \times 8$ ,  $4 \times 9$ ,  $6 \times 6$ ,  $6 \times 7$ ,  $6 \times 8$ ,  $6 \times 9$ ,  $7 \times 7$ ,  $7 \times 8$ ,  $7 \times 9$ ,  $8 \times 8$ ,  $8 \times 9$ , and  $9 \times 9$ . There are purchase options available for both schools and parents. You can learn more about Times Tales on their website, [www.timestales.com](http://www.timestales.com).

**Option 2 – Multiplication.com** – Multiplication.com also has a variety of stories you can use. An example of one of these stories is demonstrated for you to the right. Multiplication.com includes a story for most multiplication facts ( $2 \times 2$  through  $9 \times 9$ ). These stories can be easily obtained through a paid membership. You can learn more about these stories at their website, [www.multiplication.com](http://www.multiplication.com)



## Tip 3. Be Sure to Practice Learned Skills

- *“Strengthening [memories] is a very important part of learning.” – Kenneth S. Kosik, Professor of Neuroscience at UC Santa Barbara*
- *“Accessing Long Term Memories (e.g., recall) strengthens the neural networks.” – Michigan State University*

Even after you learn a new fact, you still need to practice. Practice can make a memory stronger, which will help prevent it from being lost. It will also improve both speed and accuracy.

**Technique – Using Worksheets** – When working with multiplication and division facts, worksheets are a great option. It’s important to remember, however, that the purpose of the worksheets is to strengthen the memory. If a memory hasn’t truly formed, and there are concerns of dyscalculia, then a worksheet may be of little value.



A variety of multiplication and division worksheets are available on our [worksheets page](#). These worksheets are free to print and use.