

Math Facts need to be Memorized....

Please help me by encouraging each child's mastery of strategies that will help him or her to master basic facts using accurate but efficient methods. These strategies were taught in school in the primary grades. However, each child varies in the amount of time needed to successfully understand and apply this knowledge. Hence, it is important to review the strategy/strategies your child needs more attention with. ***Practice at home is strongly encouraged and often necessary.***

Addition Levels:

+0: Adding numbers with zero. ($8+0$, $7+0$)

+1: Adding numbers with one. ($1+9$, $1+3$)

Doubles: Double the number ($8+8$, $3+3$)

Doubles Plus One: Double the number then go up or down from the sum. ($6+6=12$, so $6+7=13$ or $7+7=14$ so $6+7=13$.)

Counting On: When there is a 1, 2 or 3, just add up from the largest number. ($9+3$, $8+2$)

Fast Tens: Ten pattern ($10+3$, $10+8$, $10+7$)

Fast Nines: If you know fast tens, work off that base and go one number down or up. Since 10 plus 3 is 13, 9 plus 3 is one less.

Subtraction Levels

Counting Back: Numbers can be counted down when you start at a large number and count back 1, 2 or 3.

($8-2$, $7-1$, $9-3$) Very similar to "Counting On" but in reverse.

Counting Up: Works with numbers that are close in value. Count up from the smaller number to the higher.

($9-6$, $8-7$, $10-8$.)

Mixed: Both of the two previous strategies.

Doubles, Fact Families: Use fact families or doubles to help you find the difference. ($18-9$, $16-8$, $17-8$)

Fact Families of 11: ($11-3$, $11-6$, $10 + \underline{\quad} = 11$)

Fact families of 12 ($12-4$, $12-9$, $9+3$)

Fact Families of 13 through 18 ($18-9$, $13-8$, $10+7$)

Multiplication Levels

X0, x1, x2, x5, x10, x3, x4, x9, x6, x7, x8, x11, x12

Productive Ways to Practice math at Home

Our goals are always: to help kids make sense of numbers; to get kids “nimble with numbers” so they can easily manipulate them; to make facts fluent and easily retrieved so they can put their full concentration into problem solving and applying the facts to situations. We don’t want them to just be able to compute – we want them to be able to think mathematically. Below are multiple ideas about how to practice with your child at home in order to help accomplish some of these goals.

Websites:

www.xtramath.com Check out the helpful parent sheets to know how your child is doing, and to identify particular facts he/she could use additional support with (such as flash cards, dice or card games, etc – see below).

<http://www.mathcats.com/explore/factfamilycards.html> reinforces the concept of learning fact families instead of just the facts – addition/subtraction and multiplication/division

www.lumosity.com This is a "brain games" website that you can sign up to use for free. They have a good math game called Raindrops. There are also lots of other brain enriching activities (to improve memory, speed, vocab, etc.)

<http://www.bvsd.org/schools/douglass/Pages/home.aspx> **Douglass website to find LOADS of math games**

www.multiplication.com Good multiplication practice website

www.coolmath.com Fun games to give kids a brain break

http://investigations.terc.edu/library/Games_45.cfm On-line games by Investigations in Numbers, Data, Space

www.sumdog.com Student has specific log in. **School code = douglass-elementary**

Use music:

- Make up songs or find them on YouTube
- Purchase musical tapes of addition, subtraction, multiplication (these come in “rap”, “rock n roll”, country) – find them on Amazon or at book stores

Play games (I have a handouts with directions, game boards, and lots of ideas – let me know if you want a copy of this at home):

- “War” with playing cards (flip two cards and +, -, x)
- Dice (roll the dice and +, -, x the dice)
- Yahtzee (great for adding numbers as well as working with number sense and discussing probability)
- Close to 1000 or 0 (good +,- and number sense practice - directions for this game and more are on my website)
- Practice counting by 10, by 100, by 1000, by ~~1000~~ 1000 start at random numbers such as 52,344 to work with the concept of good number sense – this helps kids get “more nimble” with numbers
- Practice working with “base ten” system of place value – Start with a number, then add 1, subtract 100, add 1,000, etc. Using numbers with a “0” in a place value is particularly good practice to get kids nimble. For example:

Start with 64,099
+1 = 64,100
-100 = 63,999
+1,000 = 65,000

Write stories about the facts to help remember & put them into a “math facts” book:

- Write or draw pictures to help remember the more difficult ones An example: When I’m sixteen, I’ll be able to drive a 4 by 4! Draw/write the math sentence, along with a 4 x 4 car...

Make flash cards :

- make/draw visual clues on them as helpful reminders (make a visual representation of the math fact using dominoes, flowers, hearts – or use stickers, or other visual mechanism to help your child take a snapshot of the math fact in his/her brain). Remember to also write the number sentence on the card, too.
Example: $3 \times 4 = 12$ with 3 circles drawn, and 4 hearts in each circle
- make triangular flash cards (my favorite) in order to practice “fact families” (see cool cats website)