

# Strategies for Learning 100 Addition Facts

## **Easy Facts (84)**

There are (45) Count Ons. (+1, +2, or +3 problems)

*“See a 1, 2, or 3? Start big and count on”*

There are (19) Zero facts.  $0 + (0, 1, 2, 3, 4, 5, 6, 7, 8, 9$  and their turnarounds)

*“A zero in the problem makes no change.”*

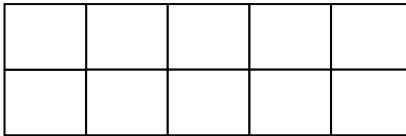
There are (6) Doubles Facts.

*“A double? No trouble. Think of the picture clue to help.”*

$4 + 4 =$  spider       $5 + 5 =$  two hands       $6 + 6 =$  egg carton       $7 + 7 =$  two weeks/calendar  
 $8 + 8 =$  two spiders       $9 + 9 =$  two tic-tac-toe boards

There are (4) Easy10-Frame facts. ( $6 + 4, 4 + 6, 4 + 5, 5 + 4$ )

*“Think of filling the 10 frame.”*



There are (10) Magic 9 facts to be emphasized.  $9 + (4, 5, 6, 7, 8$  and their turnarounds)

*“See a 9? Use your magic.”*

Our place-value system makes adding 10 to a number easy. You can use this concept to help add 9 to a number. Just add 10 to the smaller number. Then subtract 1 from the total.

(For  $9+7$ ...think  $10+7=17$ . Then subtract 1 from the total to get 16.)

## **Harder Facts (16)**

There are (6) Doubles + 1 facts. ( $5 + 6, 6 + 7, 7 + 8$  and their turnarounds)

*“When numbers are next door neighbors, think of the double to help.”*

There are (10) Make 10 and Add the Extra facts. ( $7 + 4, 7 + 5, 8 + 4, 8 + 5, 8 + 6$  and their turnarounds)

(For  $8+6$ ...think part of it makes 10 ( $8+2$ ), and 4 extra makes 14.)

## **All Facts**

Fact families: A fact family is a group of related facts using the same numbers such as:

$$4 + 3 = 7$$

$$3 + 4 = 7$$

$$7 - 3 = 4$$

$$7 - 4 = 3$$

Fact families are a very powerful tool for mastering facts; once you know one fact in a family, you can work out the other facts in the same family. *“To know one is to know all in the family.”*

Turnarounds: Understanding turnarounds in addition cuts the total number of facts to learn in half.

If  $2 + 6 = 8$ , then  $6 + 2 = 8$ . *“When you know one, you really know two!”*



# Strategies for Learning 100 Subtraction Facts

## Easy Facts (74)

There are (27) **Count Backs**. (-1, -2, and -3 problems)

*“See a -1, -2, or -3? Start big and count back.”*

There are (19) **Zero facts**. ( $n - n = 0$  or  $n - 0 = n$ ) ( $n =$  any number, 0 through 9)

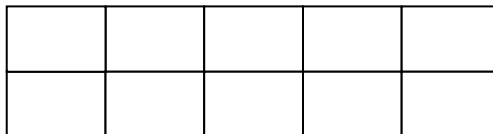
*“Take all, leave none. Take none, leave all.”*

There are (6) **Subtraction Doubles**. (18-9, 16-8, 14-7, 12-6, 10-5, 8-4)

*“A double? No trouble. Think of the picture clue from the addition doubles to help.”*

There are (7) **10-Frame Facts**. 10-(9, 8, 7, 6, 4) and 9-5, 9-4

*“Think of the 10 frame.”*



There are (15) **Count Ups**. (12, 11)-9 (11, 9)-8 (9,8)-7 (9,8,7)-6 (8,7,6)-5 (7, 6, 5)-4

*“When numbers are close neighbors, count up.”*

## Harder Facts (26)

There are (26) **Zero Finger Facts**.

*“Take from 10, add the extras. Use your zero finger to solve the problem.”*

11-(7, 6, 5, 4) 12-(8, 7, 5, 4) 13-(9, 8, 7, 6, 5, 4) 14-(9, 8, 6, 5) 15-(9, 8, 7, 6) 16-(9, 7) 17-(9, 8)

Students use their index finger as a **zero finger**, viewing their fingernail as a zero.

$$\begin{array}{r} 13 \\ - 5 \\ \hline 8 \end{array}$$

Ask your child to cover the 3 with their zero finger. You now have a new problem (10-5). The answer to this problem is 5. Now, add 5 to the number under your zero finger (3) to get the answer 8.

### The 9's Trick

$$\begin{array}{r} 14 \\ - 9 \\ \hline 5 \end{array}$$

The answer digit 5 is one more than the digit 4 directly above the 9.

$$\begin{array}{r} 14 \leftarrow 1 + 4 = 5 \\ - 9 \\ \hline 5 \end{array}$$

When subtracting by 9 you can add the minuend digits to calculate the answer.

## All Facts

Use an addition fact that you know. (Ex.  $12 - 4 = 8$  because  $4 + 8 = 12$ )

