

## Maths Ninjas Set 2 (add & subtract pairs less than 10)

### The Maths Relevance Explained

The second set is about knowing all 30 pairs of numbers that add to make numbers smaller than 10. There are quite a lot of facts to learn here and it is likely to take several weeks to learn them all and have instant recall of them. Instant recall means that your child knows the answer *without* using fingers. The table below shows all the facts.

0	1	2	3	4	5	6	7	8	9
0 + 0	1 + 0	2 + 0	3 + 0	4 + 0	5 + 0	6 + 0	7 + 0	8 + 0	9 + 0
		1 + 1	2 + 1	3 + 1	4 + 1	5 + 1	6 + 1	7 + 1	8 + 1
				2 + 2	3 + 2	4 + 2	5 + 2	6 + 2	7 + 2
						3 + 3	4 + 3	5 + 3	6 + 3
								4 + 4	5 + 4

They are best learned a group at a time, but remember that your child needs to be able to use each fact as both addition and subtraction.

eg. Knowing  $3 + 4 = 7$  means that your child should also know

$$4 + 3 = 7$$

$$7 - 4 = 3$$

$$7 - 3 = 4$$

Instant recall of these small number bonds is essential for accurate and rapid calculation, both mentally and written.

eg. If you are adding  $24 + 35$  mentally, you need to know 2 of the above bonds

( $4 + 5 = 9$  for the units,  $2 + 3 = 5$  so  $20 + 30 = 50$  for the tens).

Similarly, if you were doing it as a written calculation, you would need those same 2 facts.

If you are subtracting  $52 - 36$  mentally, you need to know 2 bonds

(for the tens:  $5 - 3 = 2$  so  $50 - 30 = 20$ ,

for the units: 6 splits into  $2 + 4$ , so you can subtract 2 first and then 4).

With secure, instant recall of number bonds (addition and subtraction), your child will feel much more confident and will be much more accurate doing both mental and written calculations.

### How to Help Your Child to Learn these Number Bonds

- Learn one group of facts at a time, eg the pairs that make 6. Check recall at random times during the day, eg. "1 plus what makes 6?". It takes only a couple of seconds each time. Next day, add in a second fact, eg  $2 + 4 = 6$ . Check recall of both facts at random times during the day, and continue to check that he/she remembers the pairs that make 10 from Set 1 too. After 4 days, your child will know the pairs that make 6. Then move on to turning them into take aways, by asking, "6 take away 3 gives how many left?" and similar. When those are secure, move on to learn the next group.
- Ask practical, real life questions too. eg. There are 5 people in our family, but Granny and Grandad will be here for lunch. How many plates do we need? Which number bond helped you to do that? This box of eggs holds 6. My recipe needs 4 eggs. How many eggs will be left? Which number bond helped you to work that out?

- It is probably best to let your child choose the order to learn these bonds. Most children will already know some of the facts for the very small numbers, but do check that they know them for subtraction too.
- Tip for learning the pairs that make 9: some children are helped by realising that he/she can use the pairs that make 10.  
eg. If  $6 + 4 = 10$ , then because 9 is one less than 10, make one of the pair is one less, so  

$$6 + 3 = 9$$
or  $5 + 4 = 9$ .
- Tip for learning the pairs that make 6: look at the spot pattern of a standard 1-6 die. It is easy to see both  
 $3 + 3 = 6$  and  $2 + 4 = 6$ . Encourage your child to draw the spot patterns, boxed up.
- Once the basic facts are known, try a revision game to reinforce them. If you can, buy a 0 to 9 die\*, or make a 0 – 10 spinner. Play a board game with your child that needs a die. On your turn roll the 0 – 9 die, but you have to state a correct number bond fact for the number you roll before you can move.  
eg. If you rolled an 8, you could say  $2 + 6 = 8$  or  $8 - 5 = 3$  or . . .  
The parent should make a few deliberate mistakes (saying incorrect number bonds) for the child to spot. It usually helps the game along if you don't seem too perfect!
- Also play games that use two dice, such as snakes and ladders. Each time your child rolls the dice, he/she should state the total and a related subtraction bond. Eg. If he/she rolls a 4 and a 5, state  $4 + 5 = 9$  and  $9 - 4 = 5$ . You could add to the revision practice and game dynamics by using this extra rule: If you land at the top of a snake, you don't have to slip down so long as you can state **all** the pairs that make a number given to you by your opponent!
- If you have a set of spotty dominoes, play games with them where your child has to declare the total each time they play a domino. (This does not cover all the number bonds because standard dominoes only go up to dots in groups of 6. If you're feeling especially creative, you could make your own set that goes up to nine dots!)

\*A mixed set of dice, very useful for playing games to revise number bonds, can be bought for about £3 from Amazon