



Parents Count Too

Helping your child with – Mental calculations

Most calculations that we carry out each day, we do in our heads. With some calculations we feel the need to reach for paper and pencil or a calculator. Yet when we play a game of darts or cards or even watch a league game, we rely on carrying out lots of mental calculations. How many points are needed to win, how many converted tries will put us in front and is there enough time?

Travelling, sharing a bill, shopping, playing or watching a sport and preparing a meal all involve mental calculations. The methods that we use when we work things out in our heads are often not the same methods that we use when we write down a sum.

The processes involved in mental calculations have remained a mystery for many children and even for many adults. Working out 998×3 is a difficult task, even when using pen and paper, if you do not realise that you can find the answer mentally by subtracting 6 from 3000.

So how do children learn to do mental calculations?

Children begin by counting things that they can see, and using objects to add and subtract. Through practice, children will begin to think of ways to add and subtract without having to use objects. One of the early ways in which children learn to add two numbers mentally is to start with the larger number and count on by ones to add the second number. This is an effective way when adding on small numbers. As children begin to deal with larger numbers, they develop a range of ways other than counting by ones.

For example, to find the answer to $25 + 89$, children could:

- Make the 89 up to 90, then add 10 and then 14
- Add 20 and 80 to make 100, then add 9 and 5, then add 100 and 14
- Add 10 twice to 89 and then add 5 more.

One of the interesting things about mental calculations is that we do not all think the same way.

What can you do at home?

- Ask your child how he or she mentally worked out the answer to a question. Explain how you would mentally work out the answer. If your child can not work out the answer mentally, give him or her objects to use for counting.

- Ask your child to work out how much change he or she will get when paying for an item at the shops.
- If your child is saving to buy an item, ask how much more money he or she will need to save before being able to buy it.
- Encourage your child to estimate the cost of two items when shopping.
- When playing games that use two dice, replace dot dice with ones that have numbers on them.
- If watching a game involving two teams, ask your child to work out mentally the difference in the scores.
- Involve your child in working out costs associated with holiday travel. For example, *We will stay five nights and the cost per night is \$70.*

