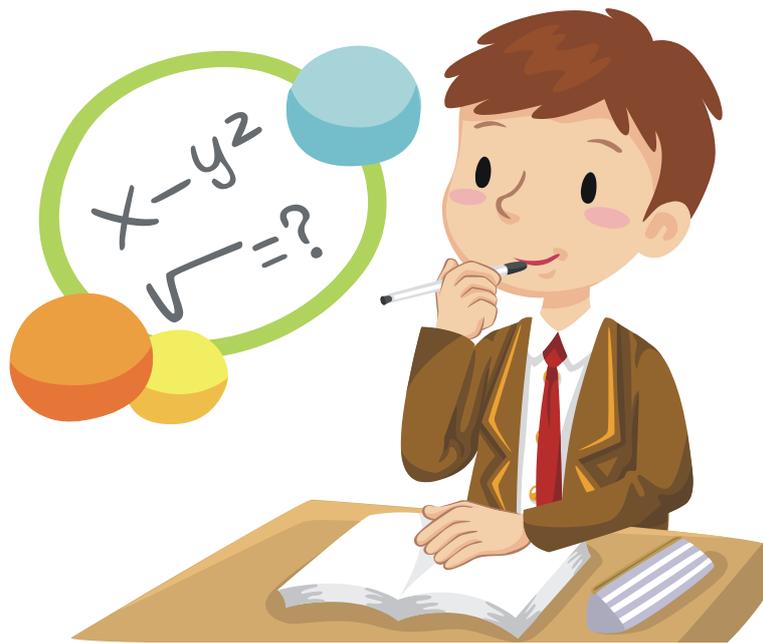


Helping Your Child With Maths at Home



KS2

USE OF MENTAL STRATEGIES

Strategies for teaching mental addition include:

❖ Counting:

$$40 + 30 \ggg (\text{count on in tens})$$

$$1\frac{1}{2} + \frac{3}{4} \ggg (\text{count on in quarters})$$

$$1.7 + 0.5 \ggg (\text{count on in tenths})$$



❖ Reordering:

$$58 + 47 - 38 \ggg 58 - 38 + 47$$

$$200 + 567 \ggg 567 + 200$$

$$1.7 + 2.8 + 0.3 \ggg 1.7 + 0.3 + 2.8 (\text{bonds to } 1)$$



❖ Partitioning:

$$365 - 40 \ggg 300 + 60 + 5 - 40 / 300 + 60 - 40 + 5$$

$$5.6 + 3.7 \ggg 5.6 + 3 + 0.7 = 8.6 + 0.7$$

$$3.8 + 2.6 \ggg 3.8 + 0.2 + 2.4$$

❖ Compensating and adjusting:

$$405 + 399 \ggg 405 + 400 - 1$$

$$5.7 + 3.9 \ggg 5.7 + 4.0 - 0.1$$

❖ Near doubles etc.

$$1.5 + 1.6 \ggg (\text{is double } 1.5 \text{ add } 0.1)$$

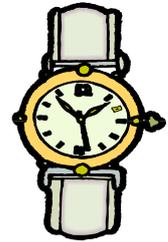
$$60 + 70 \ggg (\text{is double } 60 \text{ add } 10)$$

Examples



SHOPPING

- £ Looking at prices
- £ Calculating change - which coins, different combinations.
- £ Weighing fruit and vegetables in the supermarket.
- £ Counting pocket money.
- £ Reading labels on bottles, packets, in order to discuss capacity, weight, shape and colour.
- £ Estimating the final bill at the end of shopping while waiting at the cash out.
- £ Calculating the cost of the family going to the cinema, swimming baths, etc.



TIME

- ⌚ Looking at the clock - identify the numbers telling the time using analogue and digital clocks.
- ⌚ Calculating how long a journey will take looking based on train/bus/airline timetables.
- ⌚ Using TV guide to calculate the length of programmes.
- ⌚ Programming the video or the microwave.
- ⌚ Looking at the posting times on the post box.
- ⌚ Discussing events in the day e.g. teatime, bed time, bath time.
- ⌚ Setting an alarm clock.

Calculating time

- Discuss with the family what would be the most popular outings. Countryside, seaside, a theme park, a museum, a tourist attraction or just a picnic in the local park
- Which outings can you reach from home in...?
 - Less than 1 hour
 - Between 1 and 2 hours
 - More than 2 hours

COUNTING

Beat the clock

Time your child as they do one of the following:

- Count back from 100 in tens.
- Count back from 75 in fives.
- Starting at six, count up in tens to 206.
- Starting at 39, count up in twenties to 239.
- Starting at 67, count up in thirties to 367.



FRACTIONS

Your pizza costs £3.60. Cut it into *six equal* slices.

How much does each slice cost?

The answer is that each slice costs 60p.

- How much is half a slice?
- How much do two slices cost?
- How much does half ($\frac{1}{2}$) of the whole pizza cost?

What if you cut your pizza into *four equal* slices (quarters)?

- How much does one slice ($\frac{1}{4}$) cost now?
- How much does half cost now?



SEQUENCING

- The main events of the day;
- Routines and what comes next;
- The parts of a recipe, set of instructions;
- Imagine you have a week to do whatever you wish. Plan your week on the timetable;

REASONING

- ? Laying the table for four people, 'How many knives, forks and spoons will I need altogether?'
- ? Planning a TV viewing session, 'How long will the programme last?'

MEASUREMENT

- Calculating distances in a journey e.g. how much further?
- Calculating heights of family members - who is the tallest?
- Measuring weights of ingredients for baking.
- Wrapping parcels - what amount of paper, string do we need?
- Reading the scale on weighing machines and calculating the calibrations;
- Measuring ingredients out for a recipe using different types of spoons;
- Estimating the quantity of milk from a cow/herd;
- Estimate the amount of time to harvest a field



ACTIVITIES USING NUMBERS AROUND US

- * Using car number plates - add the digits to find biggest, smallest and total.
- * Sharing out sweets, toys etc. in groups of 2, 3, 4, 5, 6 etc. to help with times tables.
- * Using telephone numbers - value of each digit.
- * Using sandwiches to show fractions $\frac{1}{2}$, $\frac{1}{4}$.
- * Using a round sandwich cake to show fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{6}$, $\frac{1}{8}$ etc.

WEB SITES

- ☞ www.counton.org has lots of ideas and games to play.
- ☞ www.learn.co.uk help for all children with reading, maths and revision.
- ☞ www.bbc.co.uk/schools games to play and links to many subjects.
- ☞ <http://www.mathszone.co.uk/> games for children at all ages
- ☞ www.funbrain.com educational games including number
- ☞ www.funwithspot.com interactive games for KS1
- ☞ www.ladybird.co.uk counting matching games
- ☞ www.ictgames.co.uk maths games
- ☞ www.mangahigh.com
- ☞ www.coolmaths4kids.com
- ☞ www.mathsplayground.com
- ☞ www.primarygames.com

NUMBER GAMES

- ⊙ Skipping - every skip count 2, 3, 4 etc.
- ⊙ Hop scotch
- ⊙ Ludo
- ⊙ Snakes and ladders
- ⊙ Dominoes
- ⊙ Cards - number sequences
- ⊙ Cards - Rummy, Patience, Pontoon, Snap
- ⊙ Bingo
- ⊙ Yahtzee
- ⊙ Darts
- ⊙ Heads & Tails and keep a tally
- ⊙ Chess and draughts
- ⊙ Monopoly
- ⊙ Computer programmes
- ⊙ Beetle
- ⊙ Connect 4
- ⊙ Counting games to practise times tables
- ⊙ I spy a number in town, on a journey
- ⊙ Number jigsaws
- ⊙ Clock golf, croquet, crazy golf on holiday to help counting
- ⊙ Snooker and pool
- ⊙ Number Lotto
- ⊙ Dot to dot with numbers
- ⊙ Skittles
- ⊙ Happy families
- ⊙ Whist
- ⊙ Cribbage
- ⊙ Number crosswords, dot to dot, puzzles



POINTS TO REMEMBER

- **DO** 'little and often!' Counting eggs while cooking or stairs when going up to a first floor flat is a much better way of rehearsing counting than sitting over a workbook.
- **DO** give LOTS of praise. Resist the temptation to say, 'but' or to point out mistakes every time.
- Help them memorise their number facts and perform mathematical calculations in their heads.
- **DON'T** push a skill, especially if a child is becoming confused or is feeling pressured. It always pays to talk to the teacher if you feel your child does not understand something.
- Play games! Dice, dominoes, track games and cards all make excellent excuses for using and applying our number skills. And at the same time your child is learning the important skills of losing with grace and winning with style!
- Be careful with written methods you used to learn as a child! The methods used at school might be different to the ones you know.
- Remember that your time and attention is a far more important and pleasurable than any amount of TV or video game activity. Every child wants to be doing things with their loved ones.