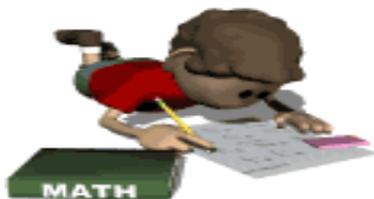When faced with a calculation problem, encourage your child to ask.....

♦ Can I do this in my head?

♦ Could I do this in my head using drawings or jottings to help me?

♦ Do I need to use a written method?

♦ Should I use a calculator?

Also help your child to estimate and then answer. Encourage them to ask……

Is the answer sensible?

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# HELP YOUR CHILD WITH MENTAL MATHS

**Key Stage One**

## Primary 3

By the end of Primary 3 children will have developed an understanding of number to 100.

They will be able to add and subtract within 100.

They will have some understanding of fractions— halves and quarters.

They will work with money and shopping within £1;  paying for goods and finding change.

# MENTAL MATHS
# STRATEGIES WE USE

♦ *Counting on/counting back*

  e.g. Counting in 2's, 5's, 10's
    Counting in 100's etc from any 2 or number

♦ *Re-ordering* numbers of make the calculation easier

 e.g. 7 + 9 + 3 + 9

 Look for doubles → 9 + 9

 Look for numbers which make 10 → 7 + 3

 *so* 9 + 9 = 18 and 7 + 3 = 10

 **Then** 18 + 10 = 28

♦ *Rounding and adjusting*

 This strategy is useful when adding or subtracting numbers that are close to a multiple of 10:

  e.g. 27 + 9 is 27 + 10 – 1

 (9 is **rounded** to 10 and then **adjusted** by subtracting 1)

♦ *Partitioning*

 This strategy involves splitting a number into tens and units:

  e.g. 46 + 23 =
    46 + 20 + 3 =
     66 + 3 = 69

# OTHER IDEAS

♦ Throw 2 or 3 dice. Find the total, difference .

♦ Throw 3 dice. Can you combine the numbers with different operations to make a target number?

 e.g.  Target 7  6 +5 - 4

♦ Talking about numbers

 Give your child clues about a number and see if they can work out the number:

 e.g.  My number is 20 less than 73

♦ Choose 3 different numbers from 1 to 9:

 e.g.  7  4  2

 How many different calculations can you find to fit this sum

  □ □ + □ =

 e.g.  72 + 4, 47 + 2, etc.

♦ Give your child the answer to a calculation:

 e.g.  13

 Ask them to write 6 calculations with 13 as the answer.

# QUICK RECALL

During KS1 children work to develop quick recall of number facts which include:

- Addition and subtraction of all numbers to at least 20

- All pairs of multiples of 10 with a total of 100 (P3)
  e.g.   70 + 30 = 100,   20 + 80 = 100

- Doubles of all numbers to 15 (P3) and corresponding halves
  e.g.   Double 13 = 26
         Half of 26 = 13

# ROUNDING AND ESTIMATING

It is important that children get a "feel" for number and quantities.

- Estimate the number of biscuits in a packet, beans on a plate, sweets in a jar, sweets in a packet.

  **Check** by counting.

- Round numbers to the nearest 10 to help make sensible estimates for calculations:

  e.g.   62—31      is *roughly* 60—30

## Possible Questions
Can you see a pattern?
Calculate mentally
How many to make 20, 30, 50,
How many more to make….?
Add 9 to 48.  / Find the sum of 36 and 11
Subtract 9 from 34/What is the difference between 32 and 11?

Can you explain how you got that answer?
Is there another way?
What is your strategy?

Guess -
- My tens digit is double my units digit. I am less than 30. What am I?
- When I subtract 8 units I am left with 3 tens and 1 unit. What number am I?

How much to make..?
Which coins to make....?
Count on to make

# USEFUL LANGUAGE

order /sequence / put in order

before / after/ between

count backwards / forwards

odd / even

estimate

more than / greatest / greater

less /fewer / least

row / column

same as / equals

value / digit

sum of / altogether / add / total / plus

subtract / minus / take away /difference between

exchange

missing number

strategy

hundred / tens / units

Multiple of 10

whole

half / halves / two equal parts or bits

quarter / quarters / double

share equally

coins / money / pence / 1p 2p  5p 10p 20p 50p £1 £2  cost

cheap / expensive / buy / sell

has same value as / worth / highest value

costs more/less / total cost / altogether

least number of coins

Shopping bill

change /exact amount

Record / Show your thinking

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This strategy can also be used with subtraction :

e.g.     74 -15          =

74 - 10 - 5   =          64 - 5 = 59

♦   ***Using Inverse Operations***

This strategy  involves using the relationship between addition and subtraction:

e.g.   16 - 12        →    12 + □     =    16

This strategy is also very useful in money calculations where finding change can be worked out by counting on:

e.g.    I buy an ice-cream at 74p

How much change do I get from £1?

74p + | **6p** | = 80p

80p + | **20p** | = £1



6p          20p

74p        80                          £1

Up to next
multiple of 10p

Up to £1