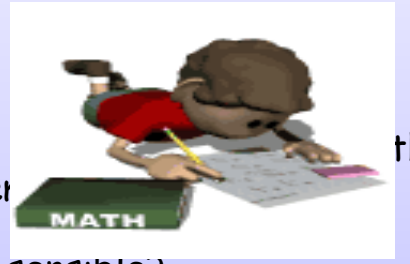
When faced with a calculation problem, encourage your child to ask.....

- 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
Encourage ther
then answer.

Is the answer sensible?

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HELP YOUR CHILD WITH MENTAL MATHS

Key Stage One

Primary 3 and Primary 4

By the end of Key Stage 1 (P4) children will have developed an understanding of number to 999.

They will be able to add and subtract within 999 and will begin to understand the concepts of multiplication and division.

They will have an understanding of fractions particularly halves and quarters.

They will work with money and shopping within £10; 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 3 digit number

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

  e.g. 7 + 9 + 3 + 9 + 2
  Look for doubles → 9 + 9
  Look for numbers which make 10 → 7 + 3
  so 9 + 9 = 18 7 + 3 = 10

  18 + 10 + 2 = 40

- ***Rounding and adjusting***

  This strategy is useful when adding or subtracting numbers that are close to a multiple of 10 or 100:

  e.g. 27 + 9 is 27 + 10 – 1

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

  e.g. 4 packets of cornflakes @ £1.99 = £7.96
  = £1.99 x 4 = £2 x 4 - 4p

- ***Partitioning***

  This strategy involves splitting a number into tens and units:

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

  Sometimes your child may find it easier to partition both numbers and then put them together again:

  e.g. 46 + 23 =
  40 + 20 = 60
  6 + 3 = 9 ***so*** 60 + 9 = 69

USEFUL LANGUAGE

multiply divide recall

partition round and adjust split

halves quarters strategy

product times lots of

sets of

groups of group

share

factors inverse operation

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

- All pairs of multiples of 100 with a total of 1000
  e.g. 400 + 600 = 1000, 700 + 300 = 1000

- Doubles of all numbers to 10 (P3) and to 20 (P4) and corresponding halves
  e.g. Double 13 = 26
  Half of 26 = 13

- Multiplication facts for 2, 3, 4, 5 and 10 times tables and corresponding division facts (P4)
  e.g. 3 x 5 = 15
  5 x 3 = 15
  15 ÷ 3 = 5
  15 ÷ 5 = 3

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 and 100 to help make sensible estimates for calculations:

  e.g. 62—31
  is roughly 60—30

  e.g. 79p x 2
  is nearly 80p x 2

  If I have £1 and crisps cost 29p would I have enough to buy 4 packets?

  29p 30p

  30p x 4 = 120p so I don't have enough money.

round to →

OTHER IDEAS

- Throw 2 or 3 dice. Find the total, difference or product.

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

  e.g. Target 28 (6 + 1) x 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.

  Extend to choosing 4 numbers and for this calculation

  □ □ + □ □ or □ □ □ + □

  □ □ □ - □

- Give your child the answer to a calculation:

  e.g. 13

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

This strategy can also be used with subtraction and multiplication:

e.g. 74 -15 =

74 - 10 - 5 = 64 - 5 = 59

37 x 2 = 30 x 2 = 60

7 x 2 = 14

60 + 14 = 74

- ***Using Inverse Operations***

This strategy involves using the relationship between addition and subtraction and also the relationship between multiplication and division:

e.g. 16 - 12 → 12 + □ = 16

3 x 4 = 12 *so* 12 ÷ 3 = 4

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 + = 80p

80p + = £1