



# EP's MENTAL MATHS - KEY SKILLS!



## MULTIPLICATION AND DIVISION

Identify and understand multiples and factors ( $F \times F = M$ )

FACTORS FIT! MULTIPLES ARE WHAT YOU MAKE!

Find all factor pairs of a number, for example:

$$12 = 1 \times 12, 2 \times 6, 3 \times 4, 4 \times 3, 6 \times 2, 12 \times 1$$

$$25 = 1 \times 25, 5 \times 5, 25 \times 1$$

And find common factors of two numbers

E.g. the common factors for 10 and 30 are 1, 2, 5 and 10

Find common multiples of two numbers

E.g. the common multiples for 4 and 8 are 8, 16, 24, 32, 40, 48, 56 etc...

## PLACE VALUE AND COUNTING

Read, write, order and compare numbers to at least 1,000,000 and understand the value of each digit.

Count forwards and backwards in steps of powers of 10 for any number

Understand negative numbers - count forwards and backwards

Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000

Use understanding of place value to  $\times$  and  $\div$  whole numbers and decimals by 10, 100 or 1000 (e.g.  $4.5 \times 10 = 45$ )

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## ADDITION AND SUBTRACTION

Add or subtract mentally with increasingly large numbers!

Add or subtract 0.1 or 0.01 to/from any number with confidence

Use our number bonds to add or subtract:

- a 4 digit number and ones (e.g.  $6124 + 7 = 6131$ ,  $3867 - 9 = 3858$ )

- a 4 digit number and tens (e.g.  $7437 + 80 = 7517$ ,  $2592 - 40 = 2552$ )

- a 4 digit number and hundreds (e.g.  $9674 + 300 = 9974$ ,  $1936 - 300 = 1636$ )

## FRACTION ACTION!

Compare and order fractions where denominators are all multiples of the same number (e.g.  $3/10$ ,  $7/20$ ,  $4/30$ )

Read and write decimal numbers as fractions (e.g.  $0.71 = 71/100$ )

Read, write, order and compare numbers with 3 decimal places (e.g. 3.452) and understand thousandths

Round decimals to the nearest whole number and 1 d/p

Identify, name and write equivalent fractions of a given fraction (e.g.  $2/3 = 4/6 = 10/15$  etc.)

Recognise mixed numbers and improper fractions and convert from one to the other (e.g.  $6/5 = 1 \frac{1}{5}$ )

Give a fraction of a number (divide by the denominator, times by the numerator) (e.g.  $2/3$  of 51 = 34)

Identify these fraction, decimal and percentages equivalents...

$$\frac{1}{2} = 0.5 = 50\% \quad \frac{1}{4} = 0.25 = 25\%$$

$$\frac{3}{4} = 0.75 = 75\%$$

$$1/5 = 0.2 = 20\%$$

$$2/5 = 0.4 = 40\%$$

$$4/5 = 0.8 = 80\%$$

## PRIME NUMBERS!

Primes have only two factors: 1 and the number itself.

Recall primes up to 19

$$2 (1, 2) \quad 3 (1, 3)$$

$$5 (1, 5) \quad 7 (1, 7)$$

$$11 (1, 11) \quad 13 (1, 13)$$

$$17 (1, 17) \quad 19 (1, 19)$$

Establish whether a number up to 100 is prime

## DOUBLES & HALVES!

Doubles and halves of decimals

Doubles and halves of all numbers

## SQUARE NUMBERS!

Recognise and use square numbers and cube numbers