



EP's MENTAL MATHS - KEY SKILLS



Know your addition facts... PTO!

MULTIPLICATION AND DIVISION

In addition to the fluent recall of 2, 5 and 10-times tables, know your 3x 4x 8x tables inside out and recognise their multiples

3 Times Table

- $0 \times 3 = 0$
- $1 \times 3 = 3$
- $2 \times 3 = 6$
- $3 \times 3 = 9$
- $4 \times 3 = 12$
- $5 \times 3 = 15$
- $6 \times 3 = 18$
- $7 \times 3 = 21$
- $8 \times 3 = 24$
- $9 \times 3 = 27$
- $10 \times 3 = 30$
- $11 \times 3 = 33$
- $12 \times 3 = 36$

And \div facts
For example:
 $3 \div 3 = 1$
 $12 \div 3 = 4$
 $27 \div 3 = 9$

4 Times Table

- $0 \times 4 = 0$
- $1 \times 4 = 4$
- $2 \times 4 = 8$
- $3 \times 4 = 12$
- $4 \times 4 = 16$
- $5 \times 4 = 20$
- $6 \times 4 = 24$
- $7 \times 4 = 28$
- $8 \times 4 = 32$
- $9 \times 4 = 36$
- $10 \times 4 = 40$
- $11 \times 4 = 44$
- $12 \times 4 = 48$

And \div facts
For example:
 $8 \div 4 = 2$
 $16 \div 4 = 4$
 $36 \div 4 = 9$

8 Times Table

- $0 \times 8 = 0$
- $1 \times 8 = 8$
- $2 \times 8 = 16$
- $3 \times 8 = 24$
- $4 \times 8 = 32$
- $5 \times 8 = 40$
- $6 \times 8 = 48$
- $7 \times 8 = 56$
- $8 \times 8 = 64$
- $9 \times 8 = 72$
- $10 \times 8 = 80$
- $11 \times 8 = 88$
- $12 \times 8 = 96$

And \div facts
For example:
 $24 \div 8 = 3$
 $40 \div 8 = 5$
 $48 \div 8 = 6$



PLACE VALUE AND COUNTING

Count from 0 in multiples of 4, 8, 50 and 100
Find 10 more or 10 less than any given number
Find 100 more or 100 less of any given number
Recognise the place value of each digit in a three-digit number
Partition numbers into 100s, 10s and 1s (e.g. $253 = 200 + 50 + 3$)
Compare and order numbers to 1000
Read and write numbers to 1000 (in numbers and words)
Round to the nearest 10 and 100

CALCULATION (+ - x \div)

Add and subtract mentally 1s, 10s and 100s to any 3 digit number
Mentally add or subtract any pair of 2 digit numbers
Multiply any 2 digit number by 10 (e.g. $24 \times 10 = 240$)
Multiply any 1 digit number by 100 (e.g. $7 \times 100 = 700$)

USE AND APPLY YOUR TIMES TABLES! (with 2-digit numbers)

For example: If you know that $2 \times 3 = 6$
You also know... $20 \times 3 = 60$ or $60 \div 2 = 30$

USE PARTITIONING TO DOUBLE OR HALVE ANY NUMBER

(e.g. Half of 58: Half of 50 = 25, Half of 8 = 4. $25 + 4 = 29$)

FRACTION ACTION!

Count up and down in tenths (and understand tenths!) e.g. $1/10, 2/10, 3/10$
Recognise fractions AS numbers (amounts between two whole numbers) e.g. $1\frac{1}{2}, 1\frac{3}{4}, 2\frac{1}{4}$
Understand, recognise and use fractions OF numbers (e.g. find $\frac{1}{4}$ of $32 = 8$)
Add and subtract fractions with the same denominator with one whole (e.g. $5/7 + 1/7 = 6/7$
and $5/7 + 2/7 = 7/7$ or 1 whole)

NUMBER PAIRS THAT TOTAL 100

For example...
 $30 + 70 = 100$
 $15 + 85 = 100$
 $32 + 68 = 100$
 $44 + 56 = 100$

And INVERSE
 $100 - 30 =$
 $100 - 85 =$
 $100 - ? = 68$
 $100 - ? = 56$

Interactive Resources: Multiple Wipeout, Wipeout Walls, Time Table, Connect it, Eggs on Legs
Dice Games: Shall I risk it, SPROD, Gozinto

Adding 1

Doubles

Adding 2

Story of 10



Adding 10

Adding 0

Near doubles

Bridging/
Compensating

+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

Addition Facts!

Learn the facts from the grid, group by group, recalling them in 3 seconds without counting in 1s!

Adding 1
Doubles up to double 10
Adding 2
Bonds to 10
Pairs of numbers that total 2, 3, 4, 5, 6, 7, 8 & 9
Adding 10
Adding 0
Near doubles
Pairs that bridge 10