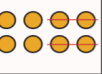# Knowledge Organiser - Maths

Key Facts - Addition and Subtraction

3 digit and 1 digit numbers

Not crossing 10's
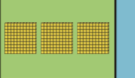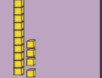
268 - 4 = 264

Hundred	Ten	Ones

343 + 6 = 349

340 ———————————— 350

Crossing 10's (Exchanging)

324		
300	20	4
300	10	14

316 + 8 = 324

316	8

324 - 8 = 316

3 digit and 2 digit numbers

Add and subtract tens

Hundred	Ten	Ones

451 + 3 tens = 481 (5 + 3 = 8)

451 - 4 tens = 411 (5 - 4 = 1

Crossing 10's (Exchanging)

258 + 80 = 338
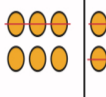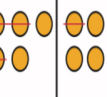* Column method
* Count in 10's mentally
* Add 100, subtract 20

Crossing 10 and 100

$$
\begin{array}{r} 368 \\ +73 \\ \hline 1 \end{array}
\quad
\begin{array}{r} 368 \\ +73 \\ \hline 41 \end{array}
\quad
\begin{array}{r} 368 \\ +73 \\ \hline 441 \end{array}
$$

$$
\begin{array}{r} 441 \\ -73 \\ \hline 8 \end{array}
\quad
\begin{array}{r} 441 \\ -73 \\ \hline 68 \end{array}
\quad
\begin{array}{r} 441 \\ -73 \\ \hline 368 \end{array}
$$

3 digit numbers
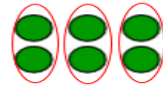
Not crossing

679 - 351 + 328

Hundred	Ten	Ones

Crossing 10's (Exchanging)

| ? |
| 154 | 269 |

$$
\begin{array}{r} 269 \\ +154 \\ \hline 423 \\ 11 \end{array}
$$

| 514 | |
| 268 | ? |

$$
\begin{array}{r} 514 \\ -268 \\ \hline 246 \end{array}
$$

Key Facts - Multiplication and Division

Multiplication is Repeated Addition

Arrays can be used to show that multiplication is repeated addition.

Addition:
2 + 2 + 2 = 6

Multiplication:
3 groups of 2 is 6
3 times 2 equals 6
3 x 2 = 6

3 times table	4 times table	8 times tables
1x3= 3	1x4= 4	1x8= 8
2x3= 6	2x4= 8	2x8=16
3x3= 9	3x4=12	3x8=24
4x3=12	4x4=16	4x8=32
5x3=15	5x4=20	5x8=40
6x3=18	6x4=24	6x8=48
7x3=21	7x4=28	7x8=56
8x3=24	8x4=32	8x8=64
9x3=27	9x4=36	9x8=72
10x3=30	10x4=40	10x8=80
11x3=33	11x4=44	11x8=88
12x3=36	12x4=48	12x8=96

Division
Means sharing

Equal Groups
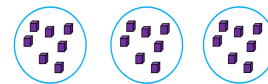
7 x 3 = 21

There are 3 groups with the same amount in each group. They are equal groups.

Sharing

I have twenty-one cakes and I share them equally into 3 plates. How many cakes will be in each plate?

21 ÷ 3 = 7

addition	The act or process of adding one thing to another.	
subtraction	The act or process of taking one number away from another number.	
division	Division is breaking a number up into equal parts.	
multiplication	To multiply means to add equal groups. You take one number and add it together a number of times.	
partition	Splitting numbers into smaller parts to make them easier to work with.	
place value	The value of each digit in a number.	