Year 3: Maths Knowledge Mat

Counting from 0

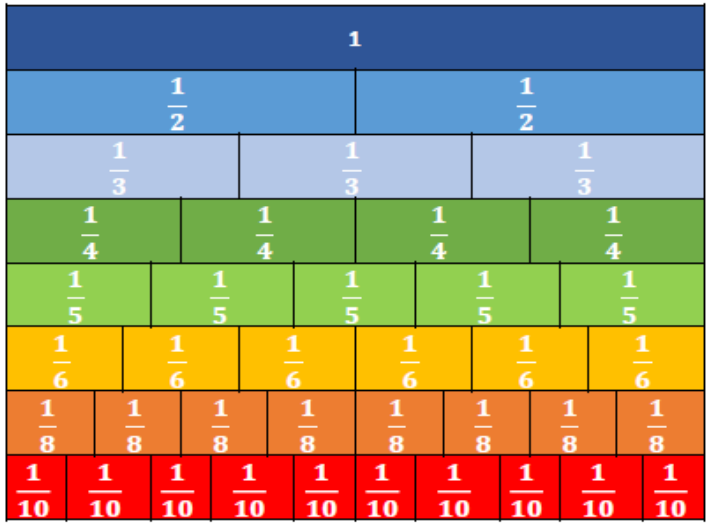
Counting in **multiples of 4** 0, 4, 8, 12, 16, 20, 24, 28, 32…
Counting in **multiples of 8** 0, 8, 16, 24, 32, 40, 48…
Counting in **multiples of 50** 0, 50, 10, 150, 20, 250, 300…
Counting in **multiples of 100** 0, 100, 200, 300, 400, 500…

Vocabulary

100	hundred
1000	thousand
+ - X ÷	inverse operations
$\frac{1}{2}$ ←	Numerator
$\frac{1}{2}$ ←	Denominator

Place value	Thousands	Hundreds	Tens	Ones		Tenths
1238	1	2	3	8	•	0
58.9	0	0	5	8	•	9
3050.4	3	0	5	0	•	4

Fractions



Equivalent Fractions

Examples:

$\frac{1}{2} = \frac{2}{4}$

$\frac{5}{10} = \frac{4}{8}$

Adding fractions

$\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$

Multiplication Tables

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

Formal methods of addition, subtraction and short multiplication and division

768 + 653 becomes

```
  7 6 8
+ 6 5 3
-------
1 4 2 1
  1 1
```

862 - 514 becomes

```
  8 6 2
- 5 1 4
-------
  3 4 8
```

934 - 456 becomes

```
    8  12  1
  ~~9~~ ~~3~~ 4
- 4  5  6
---------
  4  7  8
```

26 x 8 becomes

```
  2 6
x   8
-----
2 0 8
  4
```

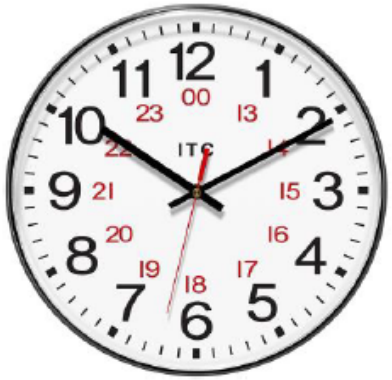
78 ÷ 6 becomes

```
  1 3
  ---
6 7 8
  1
```

Year 3: Maths Knowledge Mat

Time – Sticky Knowledge

24 hour clocks



The time is 10.10 in the morning or 22.10 in the evening in 24 hour time.

Roman numerals

This clock is showing X to II or 10 to 2.
On some clocks the 4 is IIII and sometimes it is IV

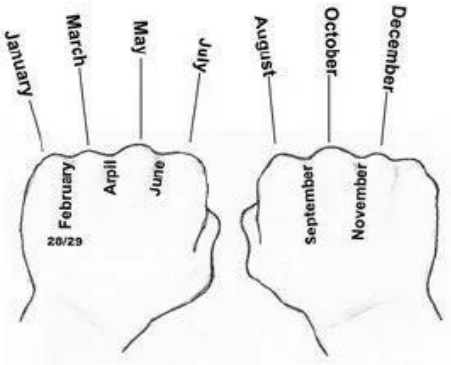
a.m. is from **midnight** until mid-day (noon)
1 to 12 in 24 hour clock time

p.m. is from mid-day (**noon**) until midnight
13 to 24 in 24 hour clock time

There are **365 days in a year.**
A leap year has 366 days. This is February 29th and happens every 4 years.

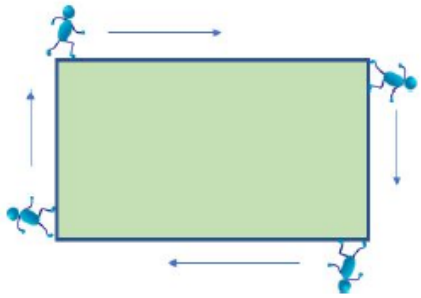
January	31 days
February	28 days
March	31 days
April	30 days
May	31 days
June	30 days
July	31 days
August	31 days
September	30 days
October	31 days
November	30 days
December	31 days

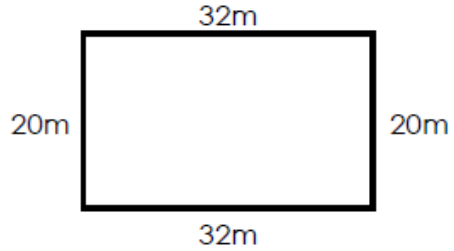
'Knuckle Mnemonic'



Perimeter

Perimeter is the distance around a 2D shape





Non symmetrical (irregular) polygons

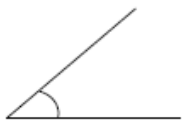
Polygon/Shape	Regular	Irregular
Triangle		
Quadrilateral		
Pentagon		
Hexagon		
Heptagon		
Octagon		

Lines

Parallel

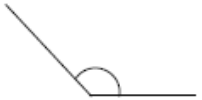
Perpendicular

Angles

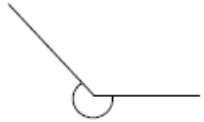


Acute angle
Less than 90°

Right angle
Exactly 90°



Obtuse angle
More than 90°
Less than 180°



Reflex angle
More than 180°
Less than 360°