



Helmshore Primary School Year 4 : Maths Knowledge

Counting from 0
Counting in multiples of 6 0, 6, 12, 18, 24, 30, 36, 42 ...
Counting in multiples of 7 0, 7, 14, 21, 28, 35, 42, 49...
Counting in multiples of 9 0, 9, 18, 27, 36, 45, 54, 63 ...
Counting in multiples of 25 0, 25, 50, 75, 100, 125, 150...
Counting in multiples of 1000 0, 1000, 2000, 3000, 4000...
Counting up and down in hundredths $\frac{1}{100}, \frac{2}{100}, \frac{3}{100}, \frac{4}{100}, \dots, \frac{99}{100}, 1$
A thousand more than 4753 is 5753. A thousand less than 4753 is 3753.

Formal methods of short multiplication and division	
351 x 7 becomes	91 ÷ 7 becomes
$\begin{array}{r} 351 \\ \times 7 \\ \hline 2157 \\ 21 \end{array}$	$\begin{array}{r} 13 \\ 7 \overline{) 91} \\ \underline{7} \\ 21 \\ \underline{21} \\ 0 \end{array}$

Rounding
Rounding to 100 and 1000 follows the same rule. 350 rounds up to 400 3500 rounds up to 4000
Rounding decimal places also follows the same rule. 3.4 rounds to 3.0 but 3.5 rounds to 4.0 3.04 rounds to 3.00 but 3.05 rounds to 3.10

Roman Numerals	
1 = I	10 = X
2 = II	20 = XX
3 = III	30 = XXX
4 = IV	40 = XL
5 = V	50 = L
6 = VI	60 = LX
7 = VII	70 = LXX
8 = VIII	80 = LXXX
9 = IX	90 = XC
	100 = C

Negative Numbers

Factors
A factor pair is a pair of numbers that, when multiplied will result in a given product. Factor pairs of 16 are 1, 16 2, 8 4, 4

Multiplication Tables (and 2x,3x,4x,5x,8x,10x from previous years)					
x	6	7	9	11	12
1	6	7	9	11	12
2	12	14	18	22	24
3	18	21	27	33	36
4	24	28	36	44	48
5	30	35	45	55	60
6	36	42	54	66	72
7	42	49	63	77	84
8	48	56	72	88	96
9	54	63	81	99	108
10	60	70	90	110	120
11	66	77	99	121	132
12	72	84	108	132	144



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Time – Sticky Knowledge

Digital and analogue clocks



Both clocks show it is 10 o'clock. But only the digital clock shows that it is pm (in the evening) because it is using 24 hour time.

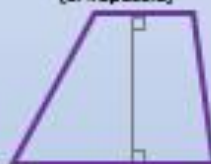
2D Shapes

Rhombus



All four sides are the same length, like a square that has been squashed sideways.

Trapezium (or trapezoid)



Two sides are parallel. Side lengths and angles are not equal.

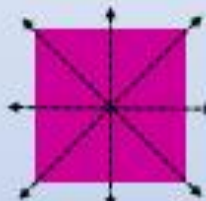
Symmetry



1 line of symmetry



3 lines of symmetry



4 lines of symmetry



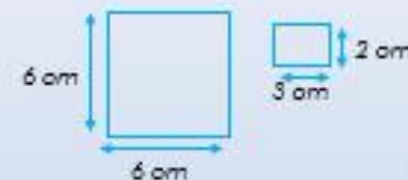
Infinite number of lines of symmetry

Simplifying fractions

$$\frac{40}{80} = \frac{20}{40} = \frac{10}{20} = \frac{5}{10} = \frac{1}{2} \quad \text{So } \frac{40}{80} = 0.5$$

Area

The area of this shape → EQUALS → the area of these two



$$\begin{aligned} \text{The area of this shape} &= (6 \times 6) + (2 \times 3) \\ &= 36 + 6 \\ &= 42 \text{ cm}^2 \end{aligned}$$

Place value Each row divides by 10

Place value Each row divides by 10	Tens	Ones	•	tenths	hundredths
45	4	5	•	0	0
$4.5 = 4\frac{5}{10} = 4\frac{1}{2}$	0	4	•	5	0
$0.45 = \frac{45}{100}$	0	0	•	4	5

Coordinates



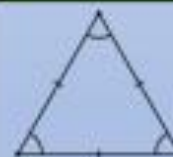
X axis comes first, so

A = (1,2)
B = (1,0)
C = (2,4)
D = (5,5)
E = (4,2)



This shape has been translated up and left by -3, -3.
(Taken away from each co-ordinate.)

Triangles



Equilateral Triangle



Right Triangle



Isosceles Triangle



Scalene Triangle



Acute Triangle



Obtuse Triangle