PLATINUM CHALLENGE KS2

Multiplying numbers by 10, 100 and 1000 mentally

All digits move to the left 1, 2 or 3 times. Fill any gaps with place holders

Eg. **14 x 10 = 140**

Th	H	T	U	.	tth	hth	thth
		1	4	.			
	1	4	0	.			

Eg **14 x 100 = 1400**

Th	H	T	U	.	tth	hth	thth
		1	4	.			
1	4	0	0	.			

Eg. **1.4 x 1000 = 1400**

Th	H	T	U	.	tth	hth	thth
			1	.	4		
1	4	0	0	.			

Dividing numbers by 10, 100 and 1000 mentally

All digits move to the right 1, 2 or 3 times. Fill any gaps with place holders Eg.

14 divided by 10 = 1.4

Th	H	T	U	.	tth	hth	thth
		1	4	.			
			1	.	4		

Eg. **14 divided by 100 = 0.14**

Th	H	T	U	.	tth	hth	thth
		1	4	.			
			0	.	1	4	

Eg. **14 divided by 1000 = 0.014**

Th	H	T	U	.	tth	hth	thth
		1	4	.			
			0	.	0	1	4

Learn common halves and apply to halving numbers to 100

½ of **1** = **0.5**
½ of **2** = **1**
½ of **3** = **1.5**
½ of **4** = **2**
½ of **5** = **2.5**
½ of **6** = **3**
½ of **7** = **3.5**
½ of **8** = **4**
½ of **9** = **4.5**

Then apply this knowledge to mixed numbers

½ of **35** = **17.5**
½ of **75** = **37.5**
½ of **33** = **16.5**
½ of **67** = **33.5**

Learn equivalent fractions, decimals and percentages

½ = 0.5 = 50%
¼ = 0.25 = 25%
¾ = 0.75 = 75%
$^1/_{10}$ = 0.1 = 10%
$^2/_{10}$ = 0.2 = 20%
$^1/_{100}$ = 0.01 = 1%
$^5/_{100}$ = 0.05 = 5%

Know all tenths and hundredths

$^1/_5$ = 0.2 = 20%
$^3/_5$ = 0.6 = 60%
$^1/_3$ = 0.33 = 33.3%
$^2/_3$ = 0.66 = 66.6%
$^1/_8$ = 0.125 = 12.5%

Well Done for achieving your Gold Award.
Can you now become a Platinum award holder?

Square Numbers

1 x 1 = **1**
2 x 2 = **4**
3 x 3 = **9**
4 x 4 = **16**
5 x 5 = **25**
6 x 6 = **36**
7 x 7 = **49**
8 x 8 = **64**
9 x 9 = **81**
10 x 10 = **100**
11 x 11 = **121**
12 x 12 = **144**

Square Roots

1 is **1**
4 is **2**
9 is **3**
16 is **4**
25 is **5**
36 is **6**
49 is **7**
64 is **8**
81 is **9**
100 is **10**
121 is **11**
144 is **12**

Conversion

How many….?
mm in a cm (10mm)
cm in a m (100cm)
m in a km (1000m)
ml in a l (1000ml)
cl in a l (100 cl)
ml in a cl (10ml)
g in a kg (1000g)
kg in a tonne (1000kg)
mg in a g (1000g)

Time
Days in a year (365/366)
Years in a century (100)
Years in a millennium (1000)
Days in each month

Learn all the factors of numbers up to 30

Factors are numbers that divide **exactly** into another number.
The factors of 12, for example, are 1, 2, 3, 4, 6 and 12.
Factors can be shown in **pairs**. The factors of 12 can be shown:
- 1 and 12 because 1 x 12 = 12
- 2 and 6 because 2 x 6 = 12
- 3 and 4 because 3 x 4 = 12

Each pair multiplies to make 12.
Factors of 12, 16, 24, 36 & 72
What is a PRIME number?
-A number that is only divisible itself and 1
(E.G.2,3,5,7,11,13,17,19)