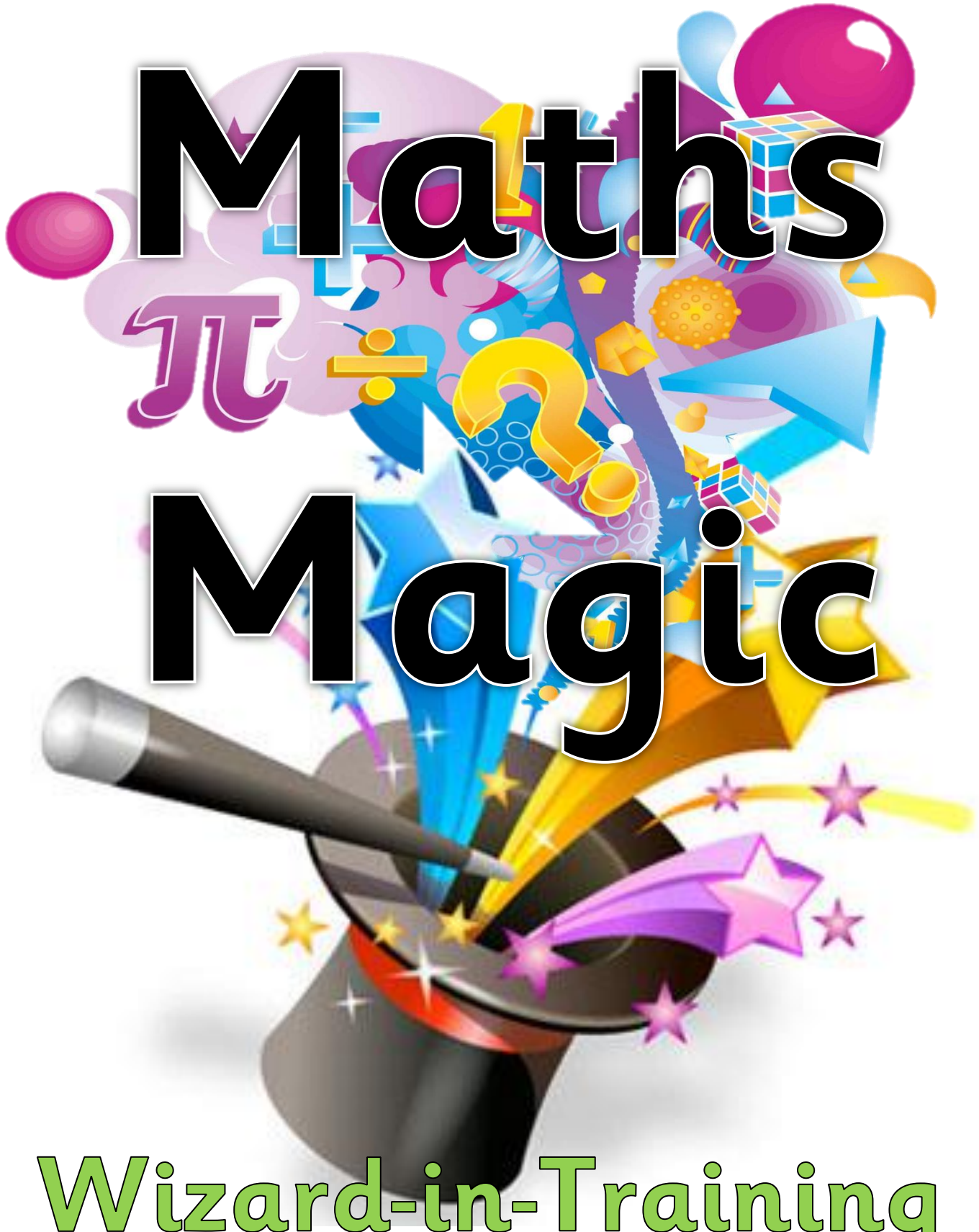
Carrant Brook Junior School

Maths Magic



Wizard-in-Training

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Welcome to The Wizard-in-Training stage! Here you will learn the strategies, or divisibility tests, to use to find out whether a number is a multiple of all times tables from 1 to 12. With this knowledge you will be able to look at numbers with 3, 4, 5, 6 or more digits and state whether they are a multiple of 6 for example.

Wizards-in-Training also continue to develop their understanding of doubling and halving. First you will practise doubling any number with 1 decimal place, for example double 3.4 is 6.8. You might do this by partitioning into units and tenths, for example double 3 is 6, and double 0.4 is 0.8, so altogether double 3.4 is 6.8. This should be done quickly and in your head. You should also know how to double numbers where the digits are over 6, for example double 7.8 is 15.6. Once secure on doubling, you will move on to be able to half any number with 1 decimal place, for example half 8.2 is 4.1. You should also know what happens is the decimal number is odd, for example half 6.7 is 3.35.

On this stage, you begin to draw your knowledge of the times tables to multiply larger numbers, for example as you know 4 x 6 is 24, you can use this knowledge to find the product of 40 and 60, which is 2400. You also develop your understanding of mathematical concepts by learning all of the factors of answers in the times tables. **Factors** *are numbers you can multiply together to get another number: Example: 2 and 3 are* ***factors*** *of 6, because 2 × 3 = 6. This means that you know that the factors of 48 are: 1, 48, 2, 24, 3, 16, 4, 12, 6 and 8, because 48 is an answer in each of these times tables.*

As a Wizard-in-Training you will use your knowledge of place value to multiply of divide any 2 or 3-digit numbers by 10, 100 or 1000. For example 100 x 45 is 4500. Or 650 divided by 10 is 65.

Finally you will develop your use of partitioning to be able to add and subtract 3 digit numbers in your head.

Target	1st	2nd	3rd
I can recognise any multiple of 2, 5 or 10			
I can recognise any multiple of 3, 4 or 9			
I can recognise any multiple of 6, 7 or 8.			
I can double any number with up to 1 decimal place			
I can halve any number with up to 1 decimal place			
I can recall quickly multiplication facts up to 12 x 12 and use them to multiply pairs of multiples of 10 and 100			
I know the factors of all times tables answers up to 12 x 12			
I can count on or back from any number in 2s, 5s or 10s (including negative numbers)			
I can multiply any 2- or 3-digit number by 10, 100 or 1000 and explain the effect			
I can divide any 2- or 3-digit whole number by 10 or 100 and explain the effect			
I can mentally add 3-digit numbers			
I can subtract 3-digit numbers			