



**ST MICHAEL & ALL ANGELS C. E. (FOUNDATION) PRIMARY  
AND PRE-SCHOOL**

# **Maths Magician Award**

## **Information for parents**



**Respect. Resilience. Responsibility. Confidence. Co-operation. Compassion.**

## St. Michael's Mental Maths Certificate System

Below you will find the order of progression for our mental maths certificate system along with a description of what the children need to know. Learning and knowing these number facts off by heart will help your child make calculations accurately and rapidly. These need to be practised at home and when your child is ready to be tested the class teacher should be told. Your child needs to have rapid recall (within approximately 3 seconds) to pass.

### Progression:

Rainbow Award	Number bonds to 10, see page 4 to help get you started
Red Award	Addition and Subtraction Facts to 5
Blue Award	Addition and Subtraction Facts to 10
Yellow Award	Number bonds to 20
Orange Award	Doubles to 20 and halves to 40
Purple Award	Multiplication and Division Facts: 2s 5s 10s
Green Award	Addition and Subtraction Facts to 20
Pink Award	Multiplication and Division Facts: 3s 4s 6s
Bronze Award	Number bonds to 100
Silver Award	Multiplication and Division Facts: 7s 8s 9s
Gold Award	Number bonds to 1000
Platinum Award	As below

Children must know them at speed without use of apparatus.

*Children should not be tested on the colours that are beyond their capabilities. For example children in Key Stage 1 and Lower Key Stage 2 do not have sufficient understanding of numbers to grasp complicated notations such as percentages and factors. This guidance is to protect children from learning something by rote, surface learning. Children need to have a secure, deep understanding of concepts to truly have learnt something and be tested on it.*

### Descriptions and Examples:

- Number bonds to 10, eg What goes with 3 to make 10? etc.
- Addition and Subtraction Facts to 5 , eg  $5-4 = 1$ ,  $3 + 1 = 4$ , etc.
- Addition and Subtraction Facts to 10, eg  $8-4 = 4$ ,  $3 + 4 = 7$ , etc.
- Number bonds to 20, eg What goes with 14 to make 20? Etc.

- Doubles to 20 and Halves to 40, eg Doubling whole numbers to 20 with answers up to 40 (double 18, double 12, double 4) and halving even numbers to 40 (half of 36, half of 24, half of 12).
- Multiplication and Division Facts: 2s 5s 10s, eg How many 2's in 18? What is 30 divided by 10?  $6 \times 5 = ?$
- Addition and Subtraction Facts to 20, eg  $17 - 9 = 8$ ,  $6 + 8 = 14$ , etc.
- Multiplication and Division Facts: 3s 4s 6s, eg How many 6's in 36? What is 24 divided by 4?  $6 \times 3 = ?$
- Number bonds to 100, eg What goes with 80 to make 100? 65 to make 100? 23 to make 100? (Any whole number)
- Multiplication and Division Facts: 7s 8s 9s, eg How many 8's in 32? What is 54 divided by 9?  $6 \times 7 = ?$
- Number bonds to 1000, eg What goes with 800 to make 1000? What goes with 650 to make 1000? What goes with 755 to make 1000? What goes with 246 to make 1000?
- Squares, Primes, Factors, Decimal and Large Number Facts, and Fraction, Decimal and % Equivalences – see below for test questions

### Example Platinum Questions

- 1) What is half 5.6? double 3.7? double 48? half 72?
- 2) What do you add to 8.2 to get 9?  
What do you add to 2.57 to get to 3?
- 3) What is  $450 - 80$ ?  $1700 + 5400$ ?  $6100 - 3400$ ?  $640 + 190$ ?
- 4) What is 8 squared? 11 squared? 40 squared? 60 squared?
- 5) List the prime numbers between 50 and 80 (Number square?)
- 6) Equivalences:  $65\% = 65/100 = 0.65$ ,  
 $1/3 = 33\% = 0.33$ ,  
 $3/5 = 60\% = 0.6$ ,
- 7) List the factors of: **36** – 1, 36, 2, 18, 3, 12, 4, 9, 6  
**64** – 1, 64, 2, 32, 4, 18, 8  
**81** - 1, 81, 3, 27, 9

# Rainbow to 10



$$0 + 10 = 10$$

$$1 + 9 = 10$$

$$2 + 8 = 10$$

$$3 + 7 = 10$$

$$4 + 6 = 10$$

$$5 + 5 = 10$$

$$10 + 0 = 10$$

$$9 + 1 = 10$$

$$8 + 2 = 10$$

$$7 + 3 = 10$$

$$6 + 4 = 10$$

$$5 + 5 = 10$$