

Magical Maths

Ben Sparks

University of Bath

@SparksMaths

www.bensparks.co.uk

The Magicians Oath

As a magician I promise never to reveal the secret of any illusion to a non-magician, unless that one swears to uphold the Magician's Oath in turn.

I promise never to perform any illusion for any non-magician without first practicing the effect until I can perform it well enough to maintain the illusion of magic.

The best way to show that you know how a trick works is...

...to perform the trick yourself.

(do not ruin it for everyone else)

The Book

Pick a 3-digit number, where the first and last digits are different.

Reverse the number.

Subtract the smaller number from the larger one.

Reverse this answer and write it underneath

Add these two numbers together

Dominoes



Think of a domino

(write it down if you'll forget)

Pick one of the numbers on it

Multiply it by 20 (double it and multiply by 10)

Subtract 36 (take away 40, add 4)

Halve the number you now have

Add the other number on the domino

Cube Roots

Pick a 2 digit number

Cube it.

(e.g. $23 \times 23 \times 23$)

Tell me your answer IN WORDS slowly.

(e.g. Twelve thousand, one hundred and sixty seven)

Think of a number, any number

Think of an integer between 1 & 100

Make the digits odd

Make the digits different

Write it down

More Mind Control?

Pick a number from 1 to 10

Multiply by 9

Add the digits together

Subtract 5

If A=1, B=2, C=3 etc...

Choose a European Country starting with that letter


(e.g. if you have 5 you'd have an E and could choose "England")

Choose an animal that starts with the last letter of that country

(e.g. if you have "England" you could choose "Dog")

Choose a colour that starts with the last letter of that animal

(e.g. if you have "Dog" you could choose "Green")

A photograph of a person from the chest up, wearing a white t-shirt. The t-shirt has orange text printed on it. The person is also wearing a dark beaded bracelet on their left wrist. The background is plain white.

There are no
orange kangaroos
in Denmark.

Missing Number

Multiply lots of single digit whole numbers together at random on a calculator, until you have a large answer (6 or 7 digits should be fine!).

e.g. $2 \times 4 \times 3 \times 9 \times 7 \times 3 \times \dots$

Read out the final answer, one digit at a time, slowly... but...

...LEAVE ONE DIGIT OUT!

Calculator Magic

Type in a 3 digit number
(e.g. 342)

type the same 3 digits in again to make 6 digits
(e.g. 342342)

Think of a number

Think of a largeish whole number
(in the 100s is good)

On a calculator, divide by 7.

Read out the answer (in decimal form), and stop
anywhere you choose after the decimal point...

The next digit is...

2 numbers

Pick any two small positive integers

Add them together and write down the result

Add the largest two numbers in your list and write down the result

Repeat at least 10 times

(more if you want... you'll get large numbers)

Read out loud your final number in the list

Secretly do one more step but don't reveal the answer...

Mental Cards

Deal out half the pack, face up

Place them face down and place the rest on top

Turn over the top three cards

Make them up to 10

Predict the card in the position calculated by the sum of the 'top three cards'

Piano Cards

Place your hands on the desk like you were playing the piano

Put a pair of cards between each pair of fingers

Make the final gap have just one odd card

Check they're all in pairs – deal each pair into two piles.

Choose a pile to put the odd card on.

Make it jump.

Remember the Magician's Oath!

Ben Sparks

University of Bath

Further Maths Support Programme

@SparksMaths

www.bensparks.co.uk