

## Magic Maths

- 1) Start with a 3 digit number. It needs to have 3 DIFFERENT DIGITS.

**E.g. 630**

- 2) Reverse the digits.

**E.g. 630 becomes 036**

- 3) Subtract the SMALLER number from the BIGGER number.

**E.g.**

$$\begin{array}{r} 630 \\ - 036 \\ \hline 594 \end{array}$$

- 4) Reverse the digits of your answer.

**E.g. 594 becomes 495**

- 5) Add those two numbers together.

**E.g.**

$$\begin{array}{r} 594 \\ + 495 \\ \hline \end{array}$$

- 6) What answer did you get?
- 7) Try it again with a different 3 digit number. What do you notice?
- 8) Try it a third time with another 3 digit number. What happens this time?
- 9) Does this always happen?
- 10) This video might explain why it happens . . .

<https://www.youtube.com/watch?v=O9VIVtM5wCY>

### Extension

Try the same thing with 4 digit numbers. What happens this time?