

# Sums. The're Math Magic

## 14 – Palindrome Numbers

**Please go through each slide stopping until you have understood the concept described**

# Sums. They're Math Magic

## 14 – Palindrome Numbers

**Palindrome numbers are the same backwards as forwards, just like palindrome words like LEVEL and CIVIC**

**Select a 3 digit number, e.g. 173, and 248**

	173	248
Reverse it	371	842
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Add	544	1090
Reverse again	445	0901
	-----	-----
Add	949	1991

**The answer is always a Palindrome Number!**

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## 14 - Palindrome Numbers

Try your own 3 digit numbers.

e.g. 567, and 978

	567	978
Reverse it	765	879
	-----	-----
Add	1332	1857
Reverse again	2331	7581
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Add	3663	8338

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## 14 - Palindrome Numbers

So we need to prove it with the number ABC

	Hundreds	Tens	Units
Start	A	B	C
Reverse	C	B	A
Add	A+C	2B	A+C
Reverse	C+A	2B	C+A
Add	2(A+C)	2B	2(A+C)

Clearly the answer is a Palindrome Number

The proof for four and more digit numbers is similar



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## 14 – Palindrome Numbers

**Please go to the next lesson.**

**Problems Solved**