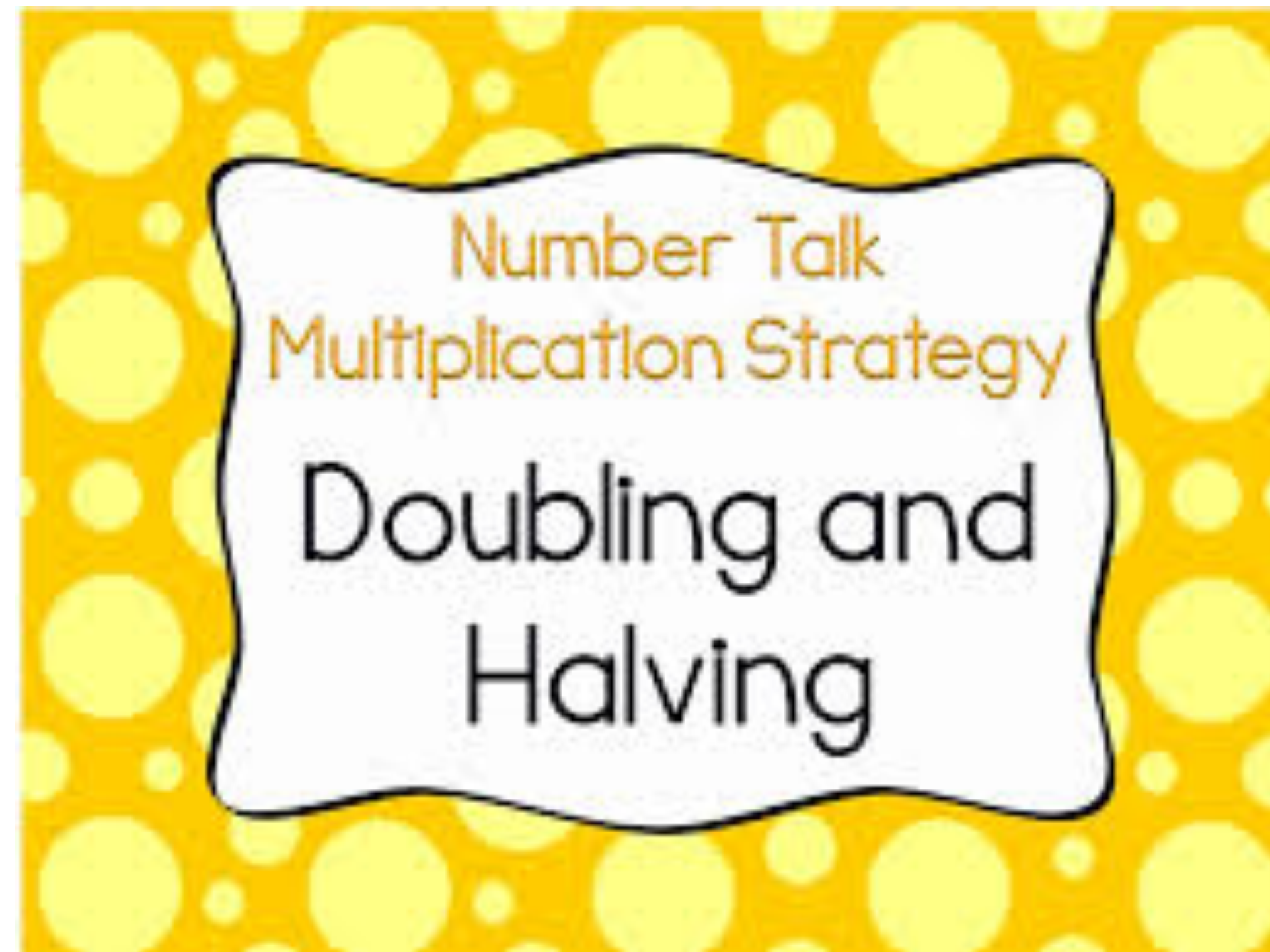


30.06.2020

I can multiply mentally using doubling and halving.



Following on from our work yesterday, we are now going to multiply large numbers mentally, using halving and doubling.

Check the following video, which shows us how to apply the **associative law** and the **commutative law**.

Associative Property

Addition	Multiplication
When you add, you can group the numbers in any combination.	When you multiply, you can group the numbers in any combination.
$a+(b+c)=(a+b)+c$	$a\times(b\times c)=(a\times b)\times c$
$2+(5+3)=(2+5)+3$	$2\times(5\times 3)=(2\times 5)\times 3$

TheWiseNest.com

$$\boxed{a} + \boxed{b} = \boxed{b} + \boxed{a}$$

Commutative Law for Multiplication

$$\boxed{a} \times \boxed{b} = \boxed{b} \times \boxed{a}$$

www.thewisenest.com

<https://www.youtube.com/watch?v=fFMPbxeM30c>

Let's do one together.

$25 \times 12 =$

Step 1. Halve

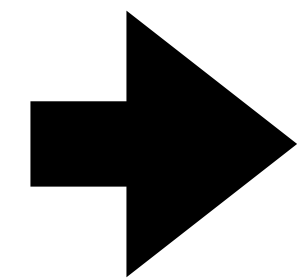
12 is even, so $12 \div 2 = 6$

Step 2. Double

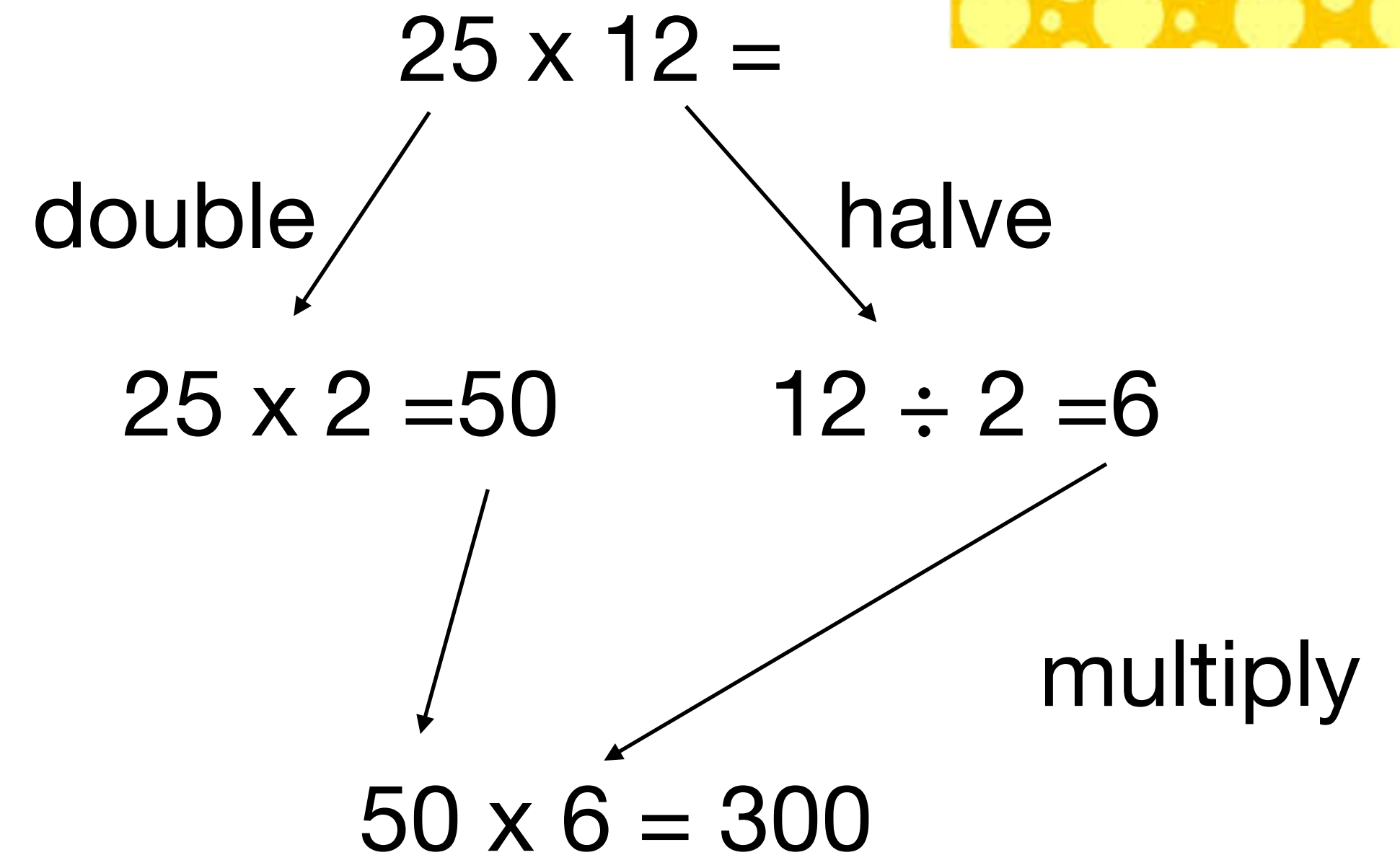
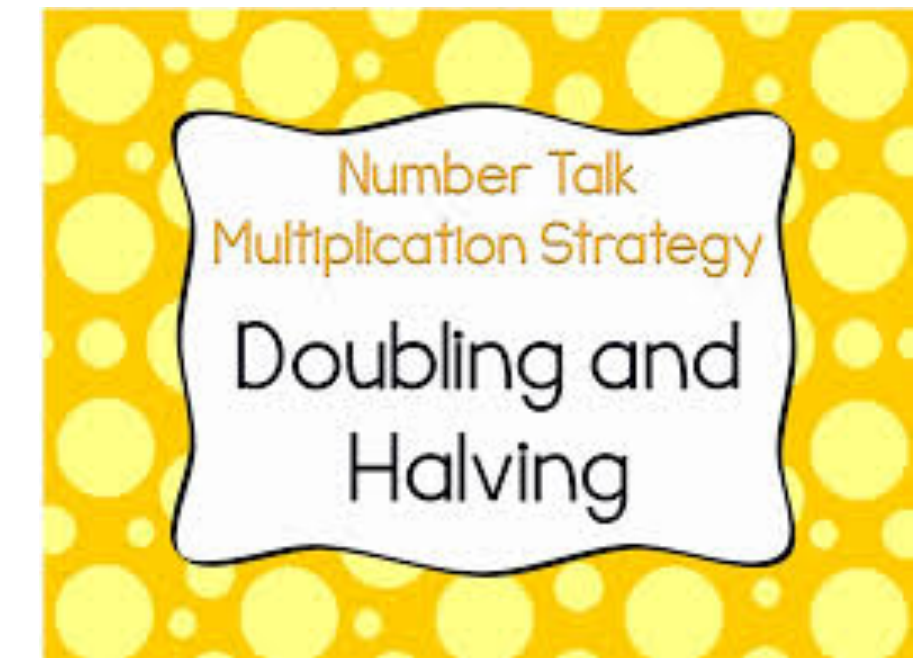
$25 \times 2 = 50$

Step 3. Multiply

$50 \times 6 = 300$

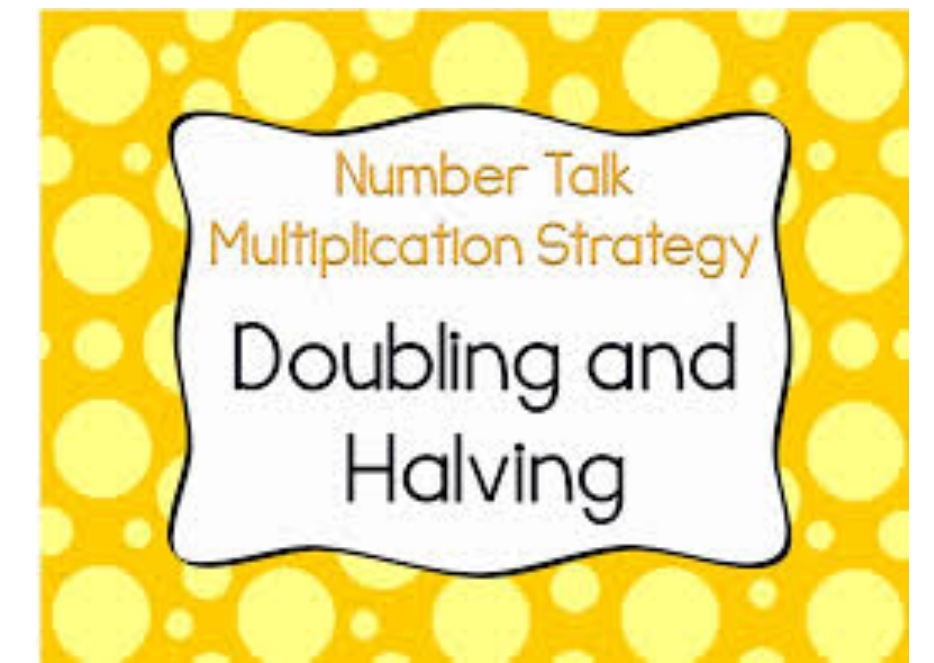


$25 \times 12 = 300$



Have a go...

Doubling and Halving



Task 1

$5 \times 14 =$

$20 \times 12 =$

$35 \times 16 =$

$45 \times 14 =$

Task 2

$25 \times 12 =$

$30 \times 18 =$

$125 \times 16 =$

$220 \times 14 =$

Task 3

$75 \times 18 =$

$55 \times 24 =$

$120 \times 36 =$

$255 \times 28 =$

**WELL
DONE!**

