

# Summer Week 4 - Maths Lesson 5

Can I use the SMILE method to divide?

## Fast five (answers on next page)

1)  $65 \times 10 =$

2)  $60 \times 80 =$

3)  $4761 + 5412 =$

4)  $6008 - 2139 =$

5)  $751 \times 6 =$

## Fast Five **Answers**

1)  $65 \times 10 = 650$

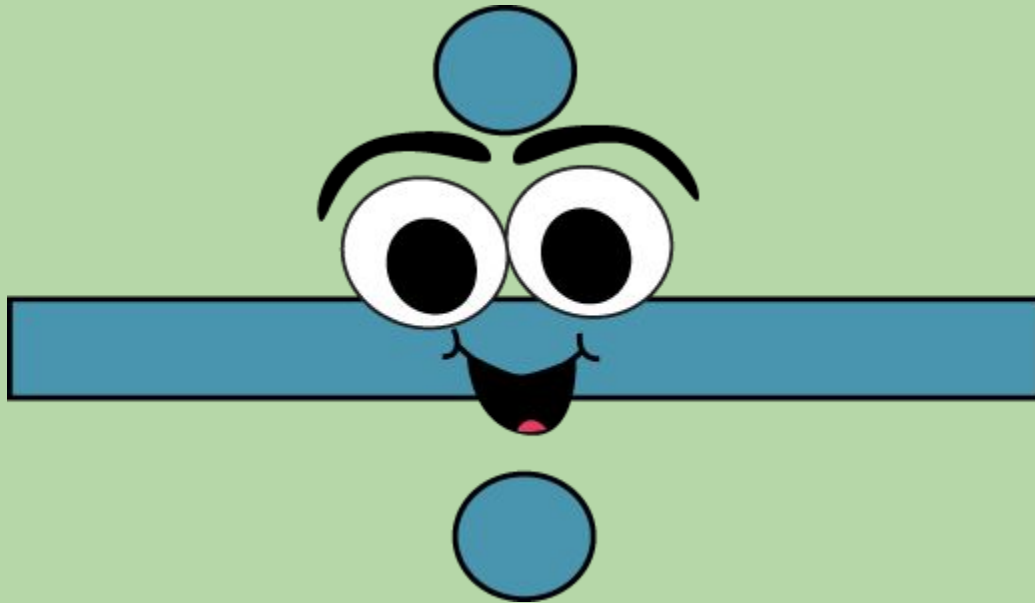
2)  $60 \times 80 = 4800$

3)  $4761 + 5412 = 10173$


4)  $6008 - 2139 = 3869$

5)  $751 \times 6 = 4506$

Today we are going to use the SMILE method for division to help us divide larger numbers.



When using the smile method we only look at the digits greater than 0. This makes it easier for us to divide the larger numbers.

$$\underline{120} \div \underline{2} =$$

$$12 \div 2 = 6$$


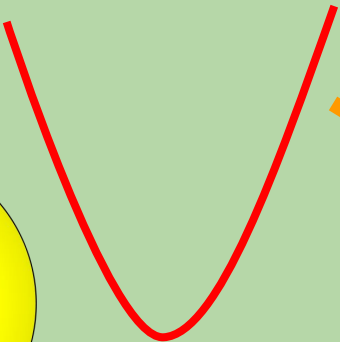
The diagram illustrates the 'smile method' for division. It shows the equation  $\underline{120} \div \underline{2} =$  in blue. A red smile-shaped line connects the underlined '12' and '2' to the underlined '12' and '2' in the second equation,  $12 \div 2 = 6$ , which is written in red. An orange arrow points from the equals sign of the first equation to the first equation of the second equation.



We divide the numbers greater than 0 and then remember to add on the same number of 0's in the question to the answer.

$$\underline{12}0 \div \underline{2} = 60$$




$$12 \div 2 = 6$$

Because 120 is 10x bigger than 12 (which is what we divided by 2) we therefore need to make the answer 10x bigger.

Let's try another one...

$$\underline{210} \div \underline{30} =$$



$$21 \div 3 = 7$$



Because there are two 0s in the question and we made both numbers 10x smaller to divide we don't need to make the answer 10x bigger (this looks like we are adding a zero on the end).

$$210 \div 30 = 7$$

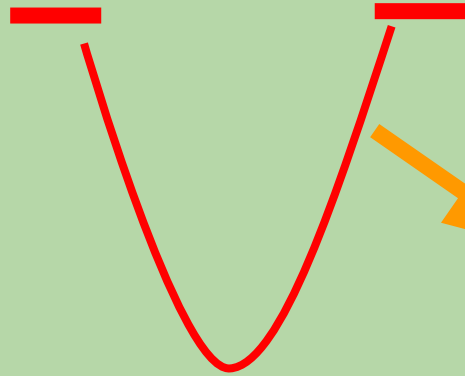


A diagram illustrating the simplification of the division problem. Two red horizontal lines are drawn under the '21' in '210' and the '30' in '30'. A red curved arrow starts from the '21' line and points down to the '21' in the simplified equation. An orange arrow starts from the '30' line and points down to the '3' in the simplified equation. The simplified equation is written in red text.
$$21 \div 3 = 7$$



Let's try another one...

$$2500 \div 50 =$$



$$25 \div 5 = 5$$



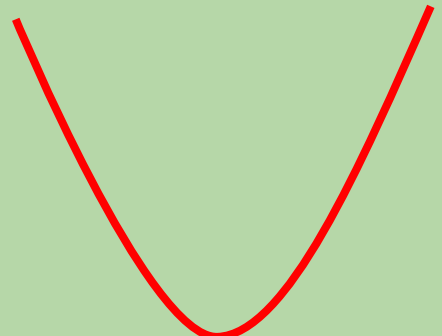
Because 2500 is 100x bigger than 25 and 50 is 10x bigger than 5, we therefore need to make the answer 10x bigger.



$$\underline{2500} \div \underline{50} = 50$$

$$25 \div 5 = 5$$

Your turn to have a go! The answer is on the next slide.

$$\underline{1600} \div \underline{40} =$$




We make 1600 100x smaller and 40 10x smaller so it is easier to divide the numbers. Then we make the answer 10x bigger.

$$\underline{1600} \div \underline{40} = 40$$


$$16 \div 4 = 4$$



## Your activities:

Choose 1 challenge to do today.

**Red** - dividing multiples of 10 by 2, 5, 3 and 4 using the smile method

**Yellow** - dividing multiples of 10 and 100 by multiples of 10 and 100 using the smile method.

**Green** - dividing multiples of 10, 100 and 1000 by multiples of 10, 100 and 1000 using the smile method.