ST PATRICK'S CATHOLIC PRIMARY SCHOOL

HOW TO DIVIDE

This short booklet will outline the formal method we use at St Patrick's for teaching division. It will allow you to practise this method with your child at home in the full confidence that your input will compliment and reinforce the work we already do.

How to Divide

1. This is often the most difficult formal method to master for children, in part I think because the layout is rather different to the other three operations. To start, place the dividing number (2) on the outside and the divided number (46) on the inside of the inverted L shape.

Example

$46 \div 2$ ➡️ $2\overline{)46}$

2. You then begin to solve the sum by seeing how many times the dividing number (2) goes into the first front-digit of the divided number (4).

Example

counting in 2's

2, 4

It goes in 2 times, which I write at the top of the inverted L, directly above the first digit of the divided number.
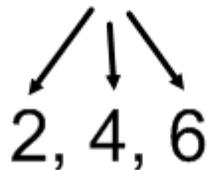
Example

$2\overline{)46}$ with 2 above the 4

How to Divide

3. Now move onto the second digit of the divided number (6) and calculate how many 2's go into 6

Example

counting in 2's

2, 4, 6

As the above figure shows, there are 3 twos in 6. So that is the digit I add to the next column of my answer. You carry on using this method for other columns if the number is larger than two digits.

$$2\overline{)46} = 23$$

Using that method the answer is 23.

How to Divide

4. This question has a problem because 5 doesn't go completely into the 7 of 75.
Look 1 x 5 = 5 and
2 x 5 = 10.
So what do you do?

Example

75 ÷ 5 ➡️ 5⟌75

The solution if a number doesn't completely go into another number is look how many times it does go in WITHOUT going over the number you are dividing into. In the case below it is it is 1 x 5. So the number of times 5 goes into 7 is 1.

7 is the number
being divided into

1 x 5 = 5 ➡️ $\dfrac{1}{5\,\lvert\,7\ 5}$

2 x 5 = 10

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However, there are 2 left over (7-5 = 2), this is called the 'remainder'. Something must be done with this.

Example

$$5\overline{)7\,^25}\quad\begin{smallmatrix}2\\1\end{smallmatrix}$$

As you can see, it moves ahead of the next digit which creates a new number 25. It is important that you write it smaller than the main number, so you are clear it has been added.

5. Now you move onto the final part of the sum which is your newly made number 25 divided by 5, which gives you 5.

Example

$$5\overline{)7\,^25}\quad 1\,5$$

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There is a final problem you can encounter, though, as the sum below shows.

$$2\overline{)126}$$

When dividing 2 into 1 it doesn't go because the dividing number (2) is bigger than the number being divided into (1).

The solution when this occurs is to say that because 2 doesn't go into 1, we write a zero (0) above the number that can't be divided into (1).

Example

$$2\overline{)\overset{0}{126}}$$

To make a number that 2 can go into we need to make the 1 a bigger number so we STRETCH it out as the next figure shows.

How to Divide

Example

$$\begin{array}{r} 0 \\ 2\overline{)126} \end{array}$$

Stretch

to

2 digits

This now gives you the number 12 which 2 will go into. 12 divided by 2 = 6.

Example

$$\begin{array}{r} 06 \\ 2\overline{)126} \end{array}$$

How to Divide

5. The sum can now be finished by dividing 6 by 2, which equals 3.

Example

$$2 \overline{\smash{\big)}\, 1\,2\,6} \;\; ^{0\,6\,3}$$

Think you've mastered division? Then try The Big 10.

THE BIG 10

Can you get The Big 10?

1. 84 ÷ 2

2. 426 ÷ 2

3. 34 ÷ 2

4. 724 ÷ 2

5. 65 ÷ 5

6. 642 ÷ 3

7. 420 ÷ 4

8. 955 ÷ 5

9. 132 ÷ 3

10. 372 ÷ 4