Written methods for short division

Learn

Dividing means sharing something equally. If we share six biscuits between three people, they will get two biscuits each.

We know that division is the **inverse** of multiplication, so your times tables give you lots of division facts.

$3 × 5 = 15$, so $15 ÷ 3 = 5$ and $15 ÷ 5 = 3$

$6 × 8 = 48$, so $48 ÷ 6 = 8$ and $48 ÷ 8 = 6$

$10 × 12 = 120$, so $120 ÷ 12 = 10$ and $120 ÷ 10 = 12$

Sometimes we have to divide larger numbers, such as $348 ÷ 3$. If this is too difficult to do mentally, we can use a written method. Look at how we write this down.

$$\begin{array}{r} 1\ \ 1\ \ 6 \\ \hline 3\ |\ 3\ \ 4\ \ {}^{1}8 \end{array}$$

> Remember what 'divide' means. It tells you how many times one number 'goes into' another number.

- To begin, we divide 3 into the 3. This goes once so we write 1 above the 3.
- Then we look at the 4. 3 goes into 4 once with one remaining. So we put 1 above the 4 and carry the remaining 1 to the 8 to make 18.
- 3 goes into 18 six times, so we write 6 above 18.
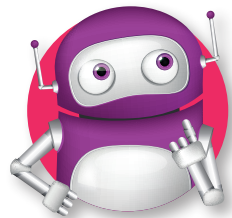- So, 348 divided by 3 equals 116.

> Check it with a multiplication! $3 × 116 = 348$

✓ Tips

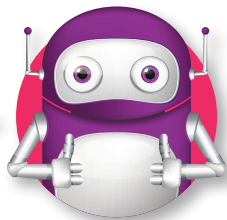- Sometimes you might not be able to divide into the first number, so you need to carry it to the next number.

$$\begin{array}{r} 0\ \ 4\ \ 2 \\ \hline 3\ |\ 1\ \ {}^{1}2\ \ 6 \end{array}$$

Talk maths

Look at the short division below and explain it aloud, saying how each stage was done.

$$\begin{array}{r} 1\ \ 3\ \ 5 \\ \hline 5\ |\ 6\ \ {}^{1}7\ \ {}^{2}5 \end{array}$$

Activities

1. Copy and complete each of these short divisions.

   a. $5\ |\ 1\ 2\ 5$ b. $3\ |\ 7\ 2$ c. $5\ |\ 9\ 0$

   d. $4\ |\ 5\ 3\ 2$ e. $2\ |\ 2\ 3\ 3\ 4$ f. $7\ |\ 7\ 4\ 9$

2. Copy and complete these divisions. Use a written method for short division.

   a. $116 ÷ 2$ b. $215 ÷ 5$ c. $426 ÷ 3$

   d. $616 ÷ 4$ e. $372 ÷ 6$ f. $927 ÷ 9$

Problems

Brain-teaser
There are 628 children in Pigwarts School. They are divided equally into four different House Teams. How many children are there in each House?

Brain-buster
Jen and her mum are going on a Swimathon. They have to swim 2760 metres in 5 hours. How many metres will they swim each hour if they swim at a steady pace?