

# Maths

## Multiplication and Division

# Short Division



# Aim

- I can use the short written method for division.

# Success Criteria

- I can set out the calculation correctly and start at the left-hand side.
- I can calculate how many times the divisor will go into the first digit of the dividend and write the answer on top of the line.
- I can regroup any remainders in the next column and continue the calculation, writing the answer on the top line.

# Related Facts



1. Do the questions in the yellow column first, use your super multiplication tables facts!
2. Can you use your answers to complete the questions in the green column?

1. $24 \div 6 =$	7. $240 \div 6 =$
2. $12 \div 4 =$	8. $120 \div 4 =$
3. $36 \div 6 =$	9. $360 \div 6 =$
4. $48 \div 4 =$	10. $480 \div 4 =$
5. $21 \div 7 =$	11. $210 \div 7 =$
6. $72 \div 8 =$	12. $720 \div 8 =$

# Related Facts



How did you use the answers from the yellow column to help you to work out the answers in the green column?

1. $24 \div 6 = 4$	7. $240 \div 6 = 40$
2. $12 \div 4 = 3$	8. $120 \div 4 = 30$
3. $36 \div 6 = 6$	9. $360 \div 6 = 60$
4. $48 \div 4 = 12$	10. $480 \div 4 = 120$
5. $21 \div 7 = 3$	11. $210 \div 7 = 30$
6. $72 \div 8 = 9$	12. $720 \div 8 = 90$

# The Short Method for Division

$$96 \div 4 =$$

Draw this neatly with a ruler. It looks a bit like a bus stop, so the written method for division is sometimes known as the 'Bus Stop' method.

$$4 \overline{) 96}$$

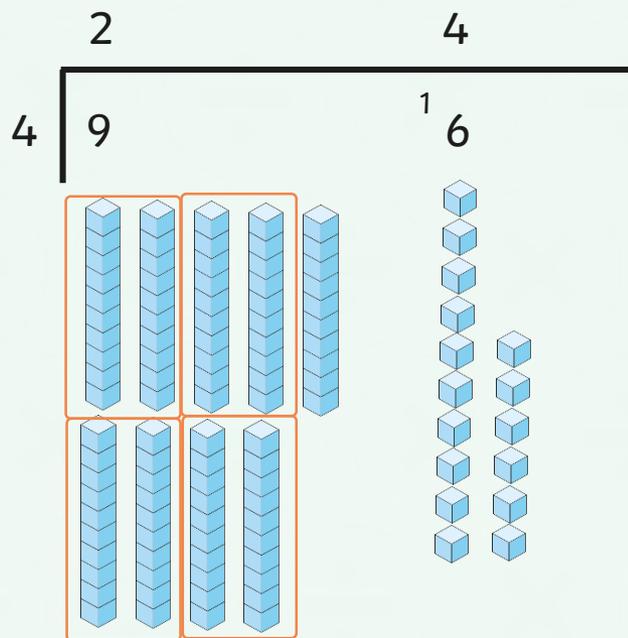
Write the number you are dividing by, the **divisor**, in front of the vertical line.

Write the number that is being divided, the dividend, on the right-hand side of the vertical line.

The answer will go on top of the horizontal line.

# The Short Method for Division

$$96 \div 4 = 24$$



This is called regrouping. We are not adding any extra cubes or taking any away – we are just exchanging tens for ones so that we can divide them easily.

When dividing, we work from the left. This is not like multiplication, addition and subtraction, where we start by looking at the columns on the right-hand side.

# Your Turn



Work this out with a partner using the written method for division.

$$65 \div 5 = 13$$

$$\begin{array}{r} 13 \\ 5 \overline{) 65} \\ \underline{5} \phantom{0} \\ 15 \\ \underline{15} \\ 0 \end{array}$$

# Your Turn



Work this out with a partner using the written method for division.

$$91 \div 7 = 13$$

$$\begin{array}{r} 13 \\ 7 \overline{) 91} \\ \underline{7} \phantom{0} \\ 21 \\ \underline{21} \\ 0 \end{array}$$

# Your Turn



Work this out with a partner using the written method for division.

$$96 \div 6 = 16$$

$$\begin{array}{r} 16 \\ 6 \overline{) 96} \\ \underline{6} \phantom{0} \\ 36 \\ \underline{36} \\ 0 \end{array}$$

# Dividing Larger Numbers



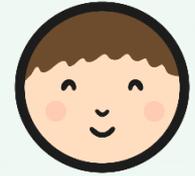
You are getting really good at this now! Let's try this one.

With larger numbers just keep working from left to right, putting your answer on the top line – you can do it!

$$3465 \div 5 = 693$$

$$\begin{array}{r} 0 \quad 6 \quad 9 \quad 3 \\ 5 \overline{) 3465} \\ \underline{3} \phantom{00} \\ 4 \phantom{00} \\ \underline{4} \phantom{00} \\ 6 \phantom{00} \\ \underline{6} \phantom{00} \\ 5 \phantom{00} \\ \underline{5} \\ 0 \end{array}$$

# The Written Method for Division Activities



**★**

I can use

**1. Complete the Fact Families**

a.  $4 \times 6 = 24$

$6 \times = 24$

**★**

b.  $9 \times 4 =$

$4 \times = 36$

**★**

c.  $3 \times 6 =$

$\times = 18$

**★**

**2. Now use the facts you know to solve these calculations.**

a.  $4 \times 6 = 24$  so  $40 \div 6 =$

b.  $24 \div 6 = 4$  so  $240 \div 6 =$

c.  $9 \times 4 = 36$  so  $90 \div 4 =$

d.  $36 \div 9 = 4$  so  $360 \div 9 =$

e.  $3 \times 6 = 18$  so  $30 \times 6 =$

f.  $18 \div 6 = 3$  so  $180 \div 6 =$

**3. Now try to solve these calculations using the short written method.**

a.  $84 \div 4 =$

$4 \overline{)84}$

b.  $84 \div 6 =$

$6 \overline{)84}$

c.  $72 \div 3 =$

$3 \overline{)72}$

d.  $98 \div 7 =$

$7 \overline{)98}$

**★**

**Family Trees**

I can use the short written method for division.

**1. Complete these short division calculations.**

a.  $85 \div 5 =$

$5 \overline{)85}$

b.  $84 \div 6 =$

$6 \overline{)84}$

d.  $98 \div 7 =$

$7 \overline{)98}$

**2. Complete these short division calculations using a written method. Remember to use a ruler!**

a.  $85 \div 5 =$

b.  $98 \div 7 =$

d.  $99 \div 3 =$

e.  $92 \div 4 =$

g.  $847 \div 7 =$

h.  $98 \div 4 =$

**★**

**Family Trees**

I can use the short written method for division (three and four-digit numbers).

**1. Complete these short division calculations.**

a.  $84 \div 4 =$

$4 \overline{)84}$

b.  $84 \div 6 =$

$6 \overline{)84}$

c.  $72 \div 3 =$

$3 \overline{)72}$

d.  $98 \div 7 =$

$7 \overline{)98}$

**2. Complete these short division calculations using a written method. Remember to use a ruler!**

a.  $927 \div 9 =$

b.  $968 \div 8 =$

c.  $847 \div 7 =$

d.  $960 \div 6 =$

e.  $6488 \div 4 =$

f.  $8617 \div 7 =$

g.  $3888 \div 9 =$

h.  $4256 \div 8 =$

# Fix It!



In pairs, use the **Answer Sheet** to mark your division calculations.

With a highlighter or coloured pen, circle or highlight any errors you have made.

Look at the Success Criteria and then tell your partner which step you made the error on.

Work with your partner to correct any mistakes.

What have you done well today?

What would you like to practise so that you can get even better at division?

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