

Short Division with Remainders

The Short Method for Division

$$74 \div 4 =$$

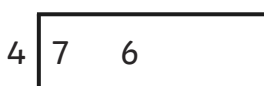
1. Draw this out neatly with a ruler. It looks a bit like a bus stop, so the written method for division is sometimes known as the 'Bus Stop' method.



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



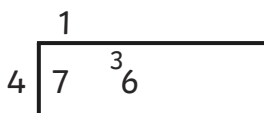
3. Write the number that is being divided, the **dividend**, on the right-hand side of the vertical line.



4. The answer will go on top of the vertical line.

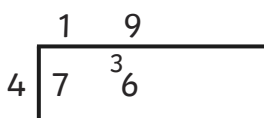
Step 1

Share 7 tens into four groups. There is 1 ten in each group with 3 tens left over. We write the 1 above the line and regroup the remaining 3 tens into 30 ones, moving this to the next column.



Step 2

How many 4s are there in 36? There are 9 exactly, so we write this above the line.



Short Division with Remainders

Remainders

$$53 \div 4 = 13 \text{ r}1$$

1. Share 5 tens into 4 groups. There is 1 ten in each group with 1 ten left over. We write the 1 above the line and regroup the left over ten onto the next column to make 13.
2. Share 13 into 4 groups? We can make 4 groups of 3, so we write 3 above the bus stop.
3. There is 1 left over. This is a remainder. So we write r1 on the line.

$$\begin{array}{r} 13 \\ 4 \overline{) 53} \\ \underline{40} \\ 13 \\ \underline{12} \\ 1 \end{array}$$

$3 \times 4 = 12$, and we were trying to share 13, so there is 1 left over!

When the Divisor Is Greater Than the First Number in the Bus Stop

If the divisor is greater than the first number in the bus stop, you consider **both** the first and second number.

$$123 \div 3 =$$

Instead of sharing 1 hundred into 3 groups

$$\begin{array}{r} 3 \overline{) 123} \end{array}$$

You can share 12 tens into 3 groups

$$\begin{array}{r} 0 \\ 3 \overline{) 123} \end{array}$$

Put a zero above the first number.

We can make 3 groups of 4 tens so we write the 4 above the **second** number on the bus stop.

$$\begin{array}{r} 041 \\ 3 \overline{) 123} \end{array}$$

Then, continue with the rest of the calculation. 3 ones can be shared into 3 groups of 1, so we write a 1 on the bus stop.



Short Division with Remainders

I can use the short written method for division where there are remainders (two-digit numbers).



1. Can you use the written method for division to calculate the answers to these questions?

a. $56 \div 4 =$ _____

b. $48 \div 3 =$ _____

c. $96 \div 6 =$ _____

d. $110 \div 5 =$ _____

e. $136 \div 8 =$ _____

2. Now try these. They have **remainders**.

a. $27 \div 5 =$ _____

b. $49 \div 4 =$ _____

c. $74 \div 6 =$ _____

d. $34 \div 3 =$ _____

e. $67 \div 9 =$ _____



Answers

1. Can you use the written method for division to calculate the answers to these questions?

a) $56 \div 4 = \underline{14}$

b) $48 \div 3 = \underline{16}$

c) $96 \div 6 = \underline{16}$

d) $110 \div 5 = \underline{22}$

e) $136 \div 8 = \underline{17}$

2. Now try these. They have remainders. (use the correct symbol to represent 'r' for remainder)

a) $27 \div 5 = \underline{5r2}$

b) $49 \div 4 = \underline{12r1}$

c) $74 \div 6 = \underline{12r2}$

d) $34 \div 3 = \underline{11r1}$

e) $67 \div 9 = \underline{7r4}$



Short Division with Remainders

I can use the short written method for division where there are remainders (two-digit numbers).



1. Use the short method of division to calculate your answers. You can do it!

a. $73 \div 5 =$ _____ b. $57 \div 4 =$ _____ c. $92 \div 3 =$ _____

d. $99 \div 8 =$ _____ e. $77 \div 6 =$ _____

2. Well done! Now try these three-digit calculations.

a. $379 \div 3 =$ _____ b. $649 \div 9 =$ _____ c. $483 \div 4 =$ _____

d. $114 \div 5 =$ _____ e. $704 \div 6 =$ _____



Short Division with Remainders

3. How can you identify multiples of 5? Use what you know about multiples of 5 to predict whether these division calculations will have a remainder. Calculate the answers to see if you were correct.

a. $2465 \div 5 =$ _____

☐ I think there will be a remainder.

☐ I think there won't be a remainder.

b. $3942 \div 5 =$ _____

☐ I think there will be a remainder.

☐ I think there won't be a remainder.

a. $7260 \div 5 =$ _____

☐ I think there will be a remainder.

☐ I think there won't be a remainder.



Answers

1. Use the short method of division to calculate your answers. You can do it!
 - a) $73 \div 5 = \underline{14r3}$
 - b) $57 \div 4 = \underline{14r1}$
 - c) $92 \div 3 = \underline{30r2}$
 - d) $99 \div 8 = \underline{12r3}$
 - e) $77 \div 6 = \underline{12r5}$
2. Well done! Now try these three-digit calculations.
 - a) $379 \div 3 = \underline{126r1}$
 - b) $649 \div 9 = \underline{72r1}$
 - c) $483 \div 4 = \underline{120r3}$
 - d) $114 \div 5 = \underline{22r4}$
 - e) $704 \div 6 = \underline{117r2}$
3. How can you identify multiples of 5? They end in 0 or 5. Use what you know about multiples of 5 to predict whether these division calculations will have a remainder. Calculate the answers to see if you were correct.
 - a) $2465 \div 5 = \underline{493 \text{ no remainder}}$
 - b) $3942 \div 5 = \underline{788r2}$
 - c) $7260 \div 5 = \underline{1452 \text{ no remainder}}$



Short Division with Remainders

I can use the short written method for division where there are remainders (two-digit numbers).



1. Use the short method of division to calculate your answers. You can do it!

a. $73 \div 5 =$ _____ b. $57 \div 4 =$ _____ c. $92 \div 3 =$ _____

d. $99 \div 8 =$ _____ e. $77 \div 6 =$ _____

2. Well done! Now try these three-digit calculations.

a. $379 \div 3 =$ _____ b. $649 \div 9 =$ _____ c. $483 \div 4 =$ _____

d. $114 \div 5 =$ _____ e. $704 \div 6 =$ _____



a. $220 \div 12 =$ _____

b.	$267 \div 12 =$				
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c. $422 \div 12 = \underline{\hspace{2cm}}$

d. $328 \div 12 =$

e.	462	÷	12	=
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Answers

1. Use the short method of division to calculate your answers. You can do it!

a) $73 \div 5 = \underline{14r3}$

b) $57 \div 4 = \underline{14r1}$

c) $92 \div 3 = \underline{30r2}$

d) $99 \div 8 = \underline{12r3}$

e) $77 \div 6 = \underline{12r5}$

2. Well done! Now try these three-digit calculations.

a) $379 \div 3 = \underline{126r1}$

b) $649 \div 9 = \underline{72r1}$

c) $483 \div 4 = \underline{120r3}$

d) $114 \div 5 = \underline{22r4}$

e) $704 \div 6 = \underline{117r2}$

3. Can you do these? When you divide by 12, you may have to exchange two-digit numbers.

a) $220 \div 12 = \underline{18r4}$

b) $267 \div 12 = \underline{22r3}$

c) $422 \div 12 = \underline{35r2}$

d) $328 \div 12 = \underline{27r4}$

e) $462 \div 12 = \underline{38r6}$