

Learning Reminders

Use short division to divide 3-digit numbers by 1-digit numbers.

$$546 \div 3$$

$$3 \overline{) 546}$$

We are going to move a sticky note along to hide and reveal each column in turn.

$$3 \overline{) 546} \begin{array}{c} 1 \\ \end{array}$$

The diagram shows the first step of short division. The number 546 is written under a horizontal line with a vertical line to the left of the 5. The number 3 is written to the left of the vertical line. The number 1 is written above the horizontal line, aligned with the 5. The 5 is followed by a superscript 2 and two yellow sticky notes that are partially covering the 4 and 6.

? How many 3s in 5?

1, and 2 left over.
We write 1 in the 100s column as we are dividing the 100s, then 2 tens in front of the 10s digit.

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8. We write 8 in the 10s column as we are dividing the 10s.

$$\begin{array}{r} 18 \\ 3 \overline{) 524} \end{array}$$

? How many 3s in 24?

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2. We write 2 in the 1s column.

$$\begin{array}{r} 182 \\ 3 \overline{) 546} \end{array}$$

? How many 3s in 6?

The answer is **182**.

Practice Sheet Mild

Division practice

1. $369 \div 3$

2. $448 \div 4$

3. $575 \div 5$

4. $378 \div 3$

5. $672 \div 6$

6. $898 \div 8$

7. $791 \div 7$

8. $643 \div 3$

9. $857 \div 4$

10. $563 \div 5$

11. $691 \div 6$

12. $936 \div 9$

Challenge

Without working them out, which of these do you think will have a remainder? Does your partner agree?

$933 \div 4$

$801 \div 3$

$696 \div 8$

$676 \div 5$

Now try them out! Were you right?

Practice Sheet Hot

Division problems

Set out and solve these calculations:

1. $233 \div 4$ 2. $547 \div 8$ 3. $451 \div 7$ 4. $628 \div 9$

Solve these word problems:

5. Some pizzas are cut into 8 slices. How many pizzas are needed for 572 slices?
6. 7 children fit into a minibus. How many minibuses are needed to take 322 children on a trip?
7. 9 friends share out 534 marbles. How many marbles does each child get? How many are left over?
8. Stickers come in packets of 6. If I need 370 stickers to give out at my party how many packets should I buy?

Now make up two problems, each involving one of these calculations:

9. $546 \div 6$

10. $428 \div 8$

Challenge

Which numbers between 1 and 12 will NOT divide evenly into 504 (i.e. with no remainder)?

Practice Sheet Answers

Division practice (mild)

- | | | |
|-----------------------------------|-----------------------------------|----------------------------------|
| 1. $369 \div 3 = 123$ | 2. $448 \div 4 = 112$ | 3. $575 \div 5 = 115$ |
| 4. $378 \div 3 = 126$ | 5. $672 \div 6 = 112$ | 6. $898 \div 8 = 112 \text{ r}2$ |
| 7. $791 \div 7 = 113$ | 8. $643 \div 3 = 214 \text{ r}1$ | 9. $857 \div 4 = 214 \text{ r}1$ |
| 10. $563 \div 5 = 112 \text{ r}3$ | 11. $691 \div 6 = 115 \text{ r}1$ | 12. $936 \div 9 = 104$ |

Challenge

$$933 \div 4 = 233 \text{ r}1 \text{ and } 676 \div 5 = 135 \text{ r}1$$

Division problems (hot)

- | | |
|---|---------------------------------|
| 1. $233 \div 4 = 58 \text{ r}1$ | 2. $547 \div 8 = 68 \text{ r}3$ |
| 3. $451 \div 7 = 64 \text{ r}3$ | 4. $628 \div 9 = 69 \text{ r}7$ |
| 5. 72 pizzas | |
| 6. 46 minibuses | |
| 7. 59 marbles per child. Three are left over. | |
| 8. 62 packets | |

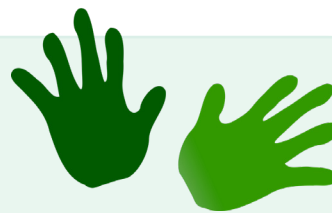
Challenge

5, 10 and 11 will not divide evenly into 504.

A Bit Stuck? Any left?

Things you will need:

- A pencil



'Chunking' on a number line is an important stepping-stone when learning to divide. Look at the example at the bottom of the page for $68 \div 5$. See how we hop in large 'chunks' of 5 (the divisor) along the line to get as close as possible to 68...?

What to do:

- Choose a division to work out - some will give remainders but a few won't!
- Calculate the answer using 'chunking' on a number line.
- Repeat at least four more times.
- Score 1 point for each correct answer but 10 points for each remainder!

$68 \div 5$

$48 \div 3$

$65 \div 4$

$92 \div 5$

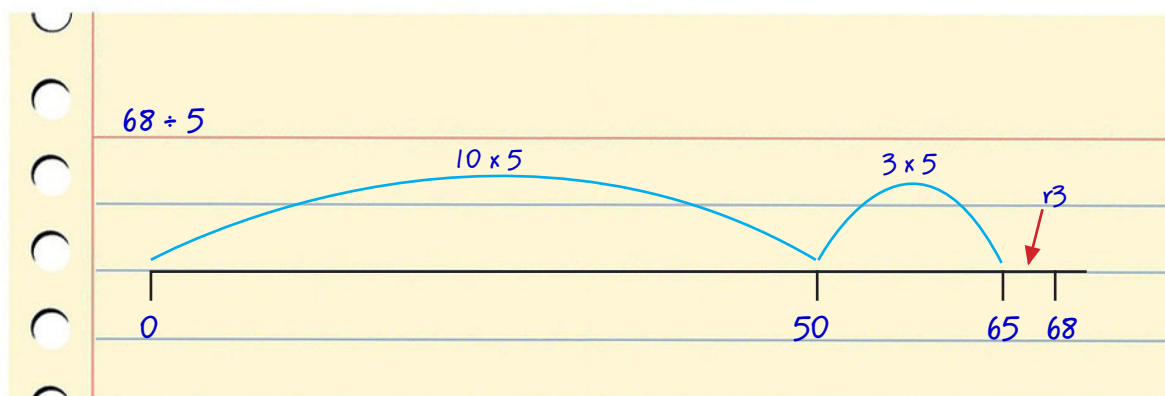
$68 \div 4$

$50 \div 3$

$71 \div 4$

$80 \div 5$

$51 \div 3$



S-t-r-e-t-c-h:

Work out $67 \div 3$, $92 \div 4$ and $107 \div 5$. Hint: the answers are bigger than 20!

Learning outcomes:

- I can use chunking to divide, giving answers between 10 and 20, with remainders.
- I am beginning to use chunking to divide, giving answers between 20 and 30, with remainders.