

## Divide a 2-digit number by a 1-digit number – no exchange

### Notes and guidance

In this small step, children build on their knowledge of times-tables and division facts, using these to support them when dividing a 2-digit number by a 1-digit number. This step focuses on partitioning a number into tens and ones and sharing into equal groups, dividing numbers that do not involve exchanging or remainders. For example,  $63 \div 3$  can be partitioned into 60 and 3 and then shared into three equal groups:  $60 \div 3 = 20$  and  $3 \div 3 = 1$ , therefore  $63 \div 3 = 21$

Children use part-whole models and place value counters to represent the calculations and support their understanding. It is important that children divide the tens first and then the ones. While it would not have an impact on their answers in this particular step, getting used to dividing in this way is beneficial for when they move on to dividing numbers involving exchanging and remainders in future steps.

### Things to look out for

- Children may be used to working out a calculation starting with the ones column as this is what they have done with addition, subtraction and multiplication.
- Children may need support partitioning numbers into tens and ones.

### Key questions

- What is \_\_\_\_\_ partitioned into tens and ones?
- What is \_\_\_\_\_ shared into \_\_\_\_\_ equal groups?
- How can the place value counters help you divide \_\_\_\_\_ by \_\_\_\_\_?
- How can you use the part-whole model to work out the division?
- What is \_\_\_\_\_ divided by \_\_\_\_\_?

### Possible sentence stems

- \_\_\_\_\_ partitioned into tens and ones is \_\_\_\_\_ tens and \_\_\_\_\_ ones.
- \_\_\_\_\_ divided by \_\_\_\_\_ is equal to \_\_\_\_\_

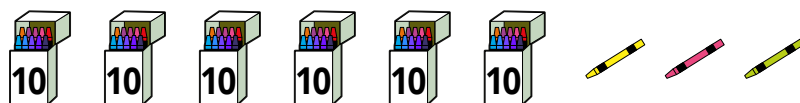
### National Curriculum links

- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods

# Divide a 2-digit number by a 1-digit number – no exchange

## Key learning

- There are 63 crayons.



- Share the crayons into three equal groups.  
Use a place value chart and some counters to help you.
- Complete the sentences.

$$6 \text{ tens} \div 3 = \underline{\hspace{1cm}} \text{ tens}$$

$$3 \text{ ones} \div 3 = \underline{\hspace{1cm}} \text{ one}$$

$$63 \div 3 = \underline{\hspace{1cm}}$$

- Dani uses place value counters to work out  $39 \div 3$

Tens	Ones
10	1 1 1
10	1 1 1
10	1 1 1

$$39 \div 3 = 13$$

Use Dani's method to work out the divisions.

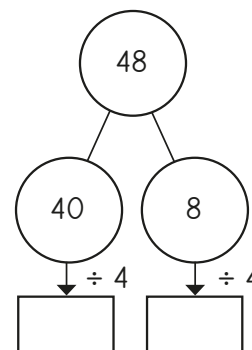
$$84 \div 4$$

$$66 \div 2$$

$$66 \div 3$$

$$69 \div 3$$

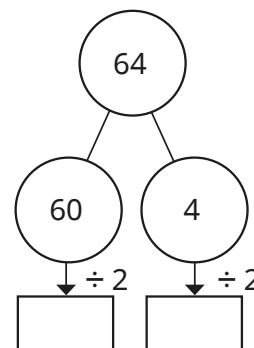
- Eva uses a part-whole model to work out  $48 \div 4$   
Complete Eva's workings.



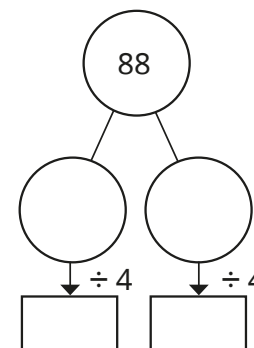
$$48 \div 4 = \underline{\hspace{1cm}}$$

- Work out the divisions.

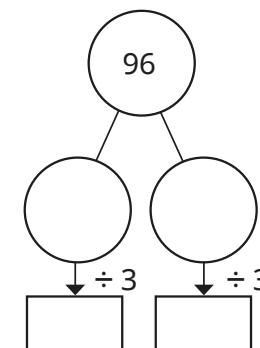
$$64 \div 2 = \underline{\hspace{1cm}}$$



$$88 \div 4 = \underline{\hspace{1cm}}$$



$$96 \div 3 = \underline{\hspace{1cm}}$$



# Divide a 2-digit number by a 1-digit number – no exchange

## Reasoning and problem solving

Tommy has 3 jars of buttons.



He shares all the buttons equally between 4 people.

How many buttons will each person get?

21

Write  $<$ ,  $>$  or  $=$  to compare the calculations.

$$24 \div 2 \quad \bigcirc \quad 36 \div 3$$

$$84 \div 2 \quad \bigcirc \quad 84 \div 4$$

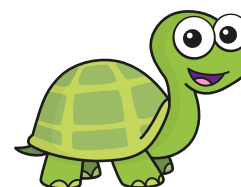
Explain your answers.

=

>

Tiny uses place value counters to work out  $44 \div 4$

Tens	Ones
10 10	1 1
10 10	1 1



The answer is 22

No

Is Tiny correct?

How do you know?

Huan thinks that 88 sweets can be shared equally between 8 people.

Is he correct?

How do you know?

Yes