

# Multiples of 10

## Notes and guidance

Children learnt the 10 times-table in Year 2 and revisited multiples of 10 in the Autumn term. In this small step, they further develop their understanding of multiples of 10 by looking at greater multiples.

Children reinforce their earlier work on place value and use a range of representations, such as ten frames, Gattegno charts and place value charts. They recognise that multiples of 10 end in a zero and use this fact to solve basic multiplication and division problems beyond the 10 times-table.

Understanding multiples of 10 is crucial for the next step, when children explore multiplying by 20, 30 and so on. This is the foundation of multiplying other 2-digit numbers using the expanded method later in this block and for more formal methods in Year 4 and beyond.

## Things to look out for

- Children may think that multiplying by 10 is always equivalent to adding a zero, rather than considering place value, which could lead to misconceptions in later years when they multiply decimals.
- Children may need support to recognise when to multiply and when to divide by 10

## Key questions

- What is the multiple of 10 before \_\_\_\_\_?
- What is the multiple of 10 after \_\_\_\_\_?
- Is \_\_\_\_\_ a multiple of 10? How can you tell?
- How many tens are there in \_\_\_\_\_?
- How can you use a Gattegno chart/place value chart to help multiply or divide a number by 10?
- What is the same about all multiples of 10? What is different?

## Possible sentence stems

- I know \_\_\_\_\_ is a multiple of 10 because ...
- \_\_\_\_\_ multiplied by 10 is equal to \_\_\_\_\_
- \_\_\_\_\_ is 10 times the size of \_\_\_\_\_
- There are \_\_\_\_\_ tens in \_\_\_\_\_

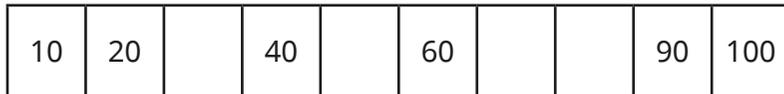
## National Curriculum links

- Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2)

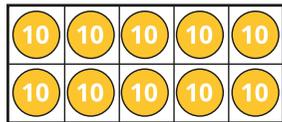
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## Key learning

- Complete the number track.

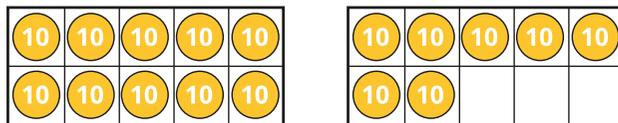


- Use the ten frame to complete the sentence.



10 tens are equal to \_\_\_\_\_

Use the ten frames to complete the calculation.



$17 \times 10 = 10 \times 10 + 7 \times 10 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

- Work out the multiplications.

$14 \times 10$	$19 \times 10$	$23 \times 10$	$10 \times 26$
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- Dexter has 13 bags of marbles.  
There are 10 marbles in each bag.  
How many marbles does Dexter have altogether?

- Which of these numbers are multiples of 10?



Explain how you know.

- A bush is 4 m tall.  
A tree is 10 times as tall as the bush.  
How tall is the tree?

- Fill in the missing numbers.

▶ $23 \times 10 = \underline{\quad}$	▶ $\underline{\quad} \times 10 = 280$
▶ $64 \times \underline{\quad} = 640$	▶ $\underline{\quad} \times 10 = 420$

- A ribbon is 270 cm long.



- Ron wants to cut the ribbon into 10 cm pieces.  
How many pieces can he cut?

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## Reasoning and problem solving

Teddy saves £10 a week.  
 How many weeks will it take him to save £120?  
 How do you know?



12 weeks

Mr Trent has a piece of wood.



Mr Trent cuts it into three parts, A, B and C.

- Part A is 10 times as long as part C.
- Part B is 4 times as long as part C.
- Part A is 100 cm long.

How long was the piece of wood before Mr Trent cut it?

150 cm

Here is a Gattegno chart and a place value chart.

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

Hundreds	Tens	Ones

Show each number on both charts.

21	14	32	40	26
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Multiply each number by 10  
 Show the results on the charts.

What is the same and what is different?



210, 140, 320,  
400, 260