

Tenths on a place value chart

Notes and guidance

In this small step, children continue to explore the tenths column in a place value chart, extending their previous learning to include numbers greater than 1

It is important that children understand that 10 tenths are equivalent to 1 whole, and therefore 1 whole is equivalent to 10 tenths. Children use this knowledge when counting both forwards and backwards in tenths. When counting forwards, children should know that 1 comes after 0.9, and when counting backwards that 0.9 comes after 1. Links can be made to the equivalence of 10 ones and 1 ten to support understanding.

Things to look out for

- If the number of tenths reaches 10, children may call this “zero point ten” and write 0.10 rather than exchanging for 1 one.
- When counting up in tenths, children may go from 9 tenths to 0 tenths, but then forget to increase the value of the ones column, for example 1.8, 1.9, 1.0, 1.1 ...
- Similarly, when counting down in tenths, children may forget to subtract a 1 to exchange, for example 2.2, 2.1, 2.0, 2.9, 2.8 ...

Key questions

- What is a tenth?
- What is a decimal point?
- If you have _____ in the tenths column, what number do you have?
- How many tenths make 1 whole?
- If you have 10 in the tenths column, can you make an exchange?
- How many wholes/tenths are in the number _____?

Possible sentence stems

- There are _____ tenths in 1 whole.
- 1 whole is equivalent to _____ tenths.
- There is/are _____ whole/wholes and _____ tenths.
- The number is _____

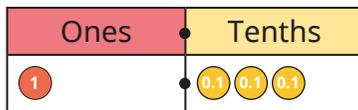
National Curriculum links

- Recognise and write decimal equivalents of any number of tenths or hundredths

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Key learning

- Teddy uses place value counters and a place value chart to represent the number 1.3



There is 1 whole and 3 tenths.
The number is 1.3

- Use Teddy's method to represent the numbers.



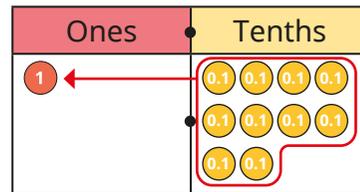
- Complete the sentences for each number.

There is/are _____ whole/wholes and _____ tenths.

The number is _____

- Mo is counting up in tenths.

When he gets to 10 tenths, he exchanges them to make 1 one.

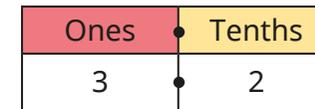


- Use place value counters to count up in 0.1s from 1 whole.

- Complete the number track.



- Complete the sentences for the number in the place value chart.



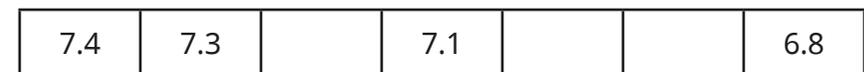
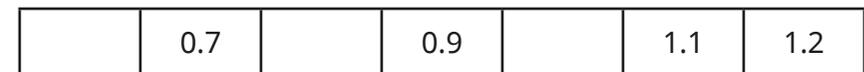
There are _____ ones and _____ tenths.

$$\begin{aligned} \text{_____ ones} + \text{_____ tenths} &= 3 + 0.2 \\ &= 3.2 \end{aligned}$$

- Use a place value chart and sentences to describe the decimals.



- Complete the number tracks.



Tenths on a place value chart

Reasoning and problem solving

Jack uses the digit cards and the place value chart to make a number.



Ones	Tenths



My number is greater than 1 but less than 5

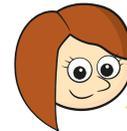
What number could Jack have made?
Find as many possibilities as you can.

ten possible numbers:
3, 3.4, 3.5, 3.6, 3.7,
4, 4.3, 4.5, 4.6, 4.7

Rosie, Whitney and Amir are counting up in 0.1s.
They get to this number.



Tens	Ones	Tenths
	1 1	0.1 0.1
	1 1	0.1 0.1
	1 1	0.1 0.1
	1 1	0.1 0.1
	1	0.1



The next number will be 9.10

Rosie



The next number will be 10

Amir

The next number will be 10.9



Whitney

Who do you agree with?

Explain your answer.



Amir