2.3.21
WALT Recognise Tenths on a Place Value Grid

F
R
PS

Vocabulary

place value

place value grid

place value holder

less than

more than

one

whole numbers

fractional numbers

separated

decimal point

tenths

fraction

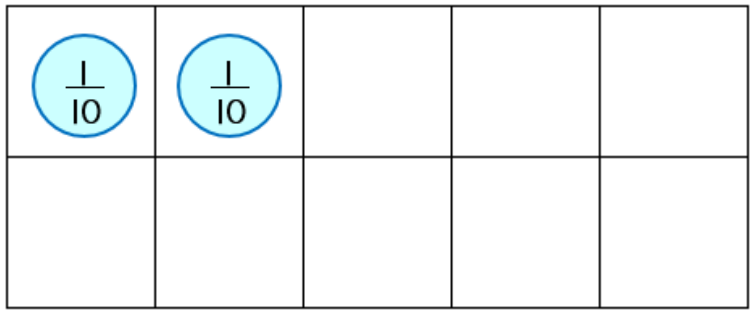
decimals

equivalent

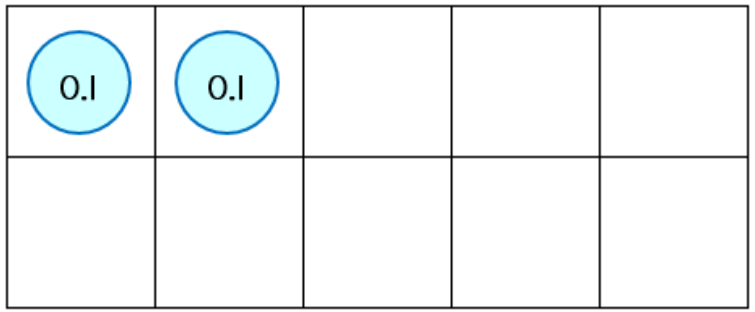
diagram

Showing Tenths in Different Ways

Using diagrams, tenths can be shown as fractions or decimals.

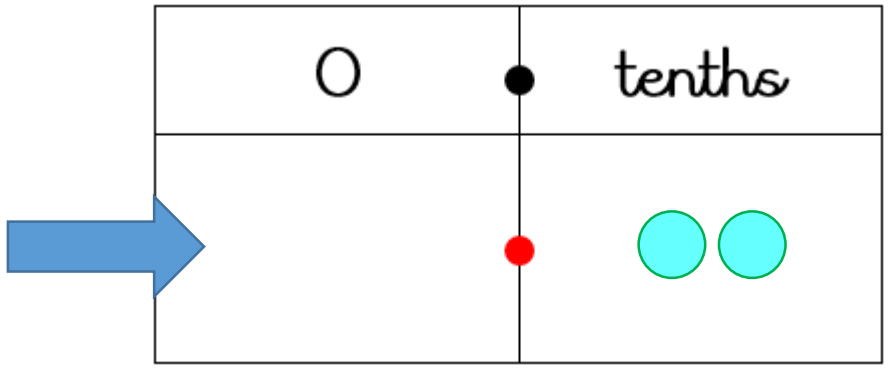


$^{2}/_{10} = 0.2$



Tenths can also be shown using a place value grid.

The ones column is empty because there are no ones.

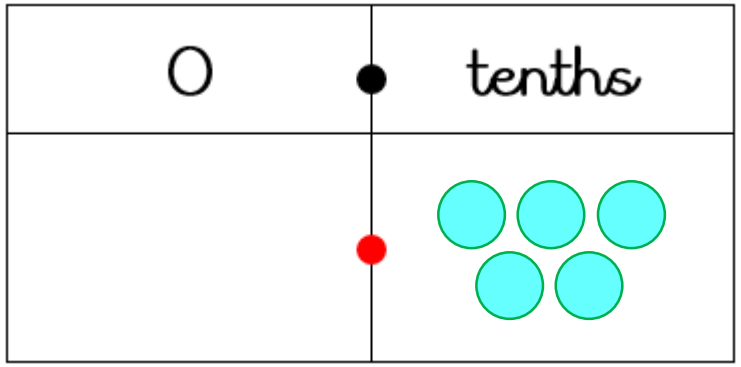


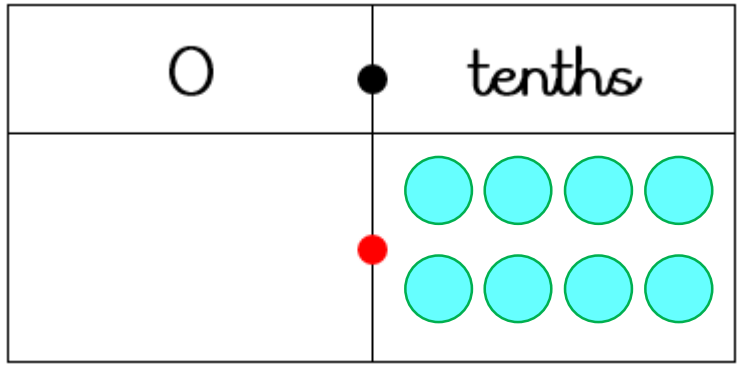
0.2

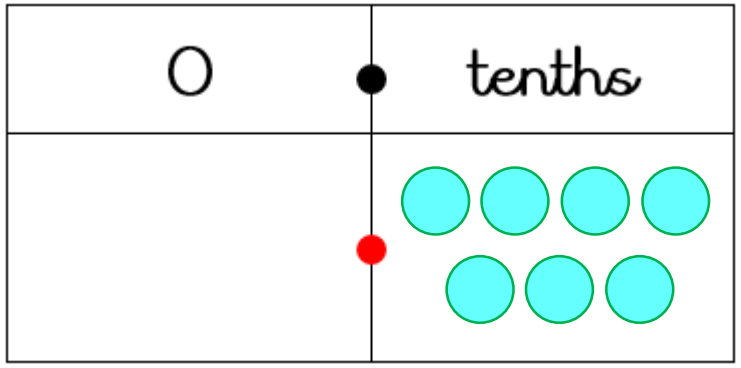
When this is written as a **decimal**, a zero is written in the ONES column – as a place value holder.

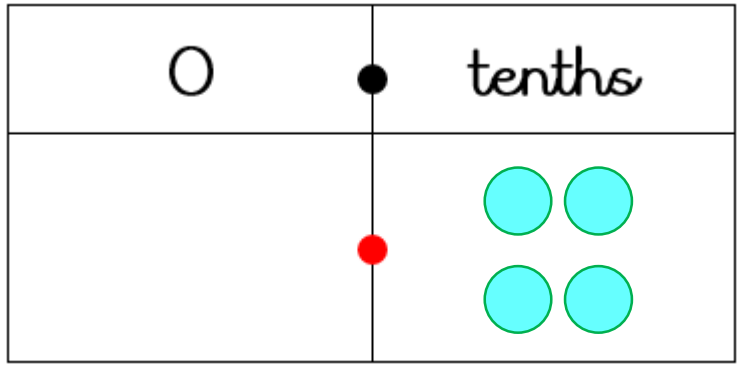
Showing Tenths on a Place Value Grid

Which **decimals** do these place value grids show?



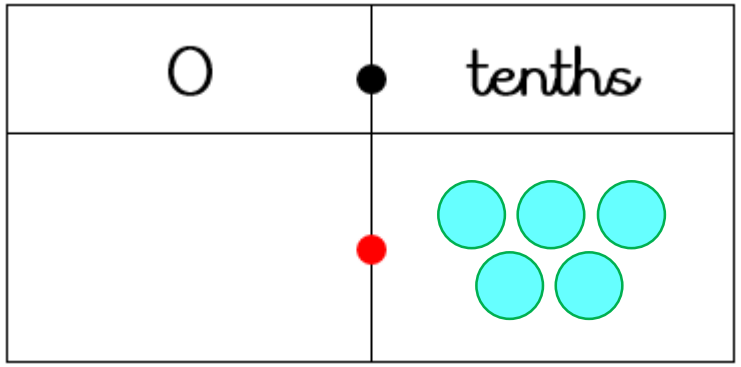




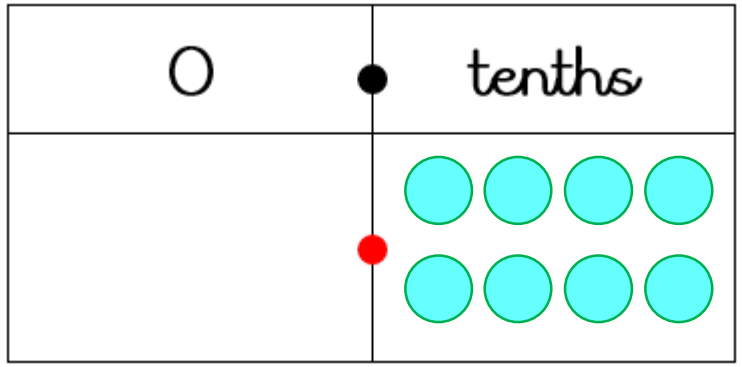


Showing Tenths on a Place Value Grid

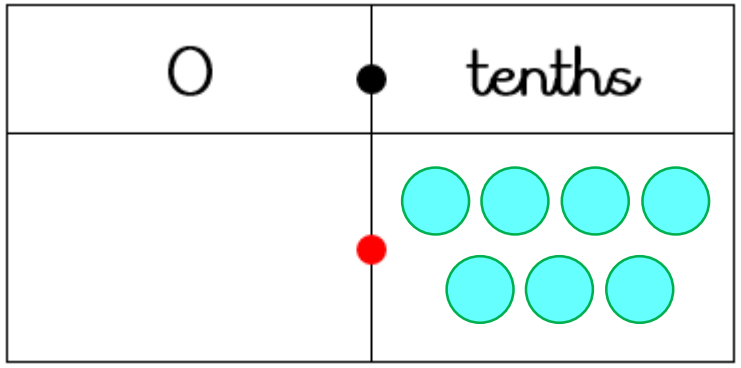
Which **decimals** do these place value grids show?



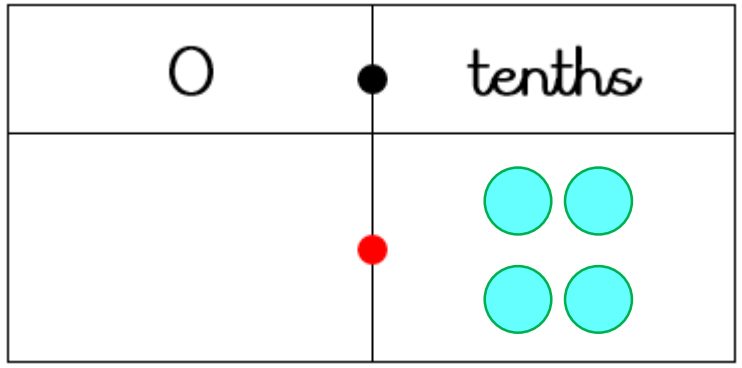
0.5



0.8



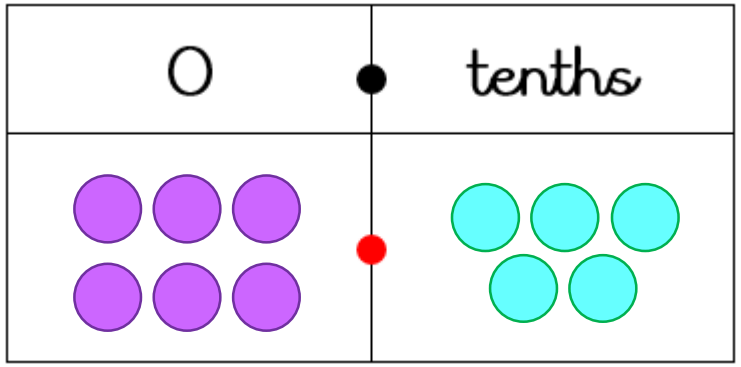
0.7



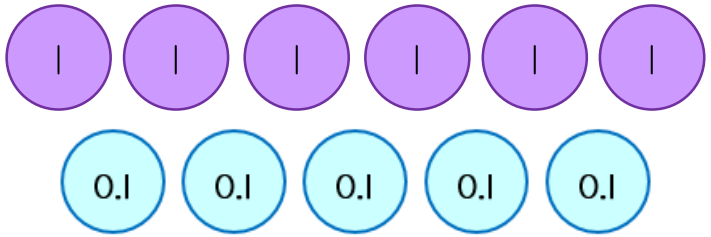
0.4

Showing Ones and Tenths

Numbers larger than one whole can also be shown using the place value grid.



This number has 6 ones and 5 tenths.

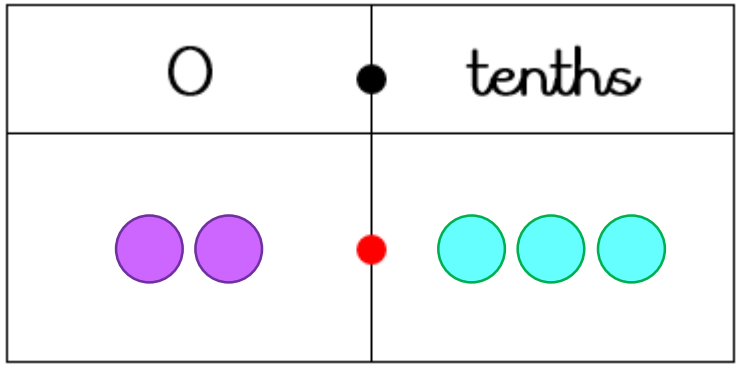


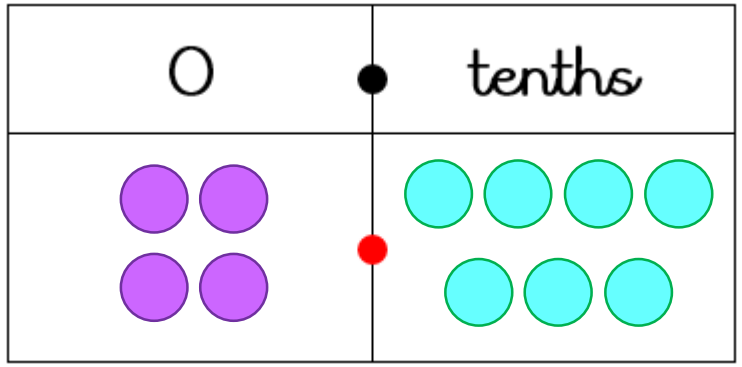
As a **decimal**, this number is written as: 6.5

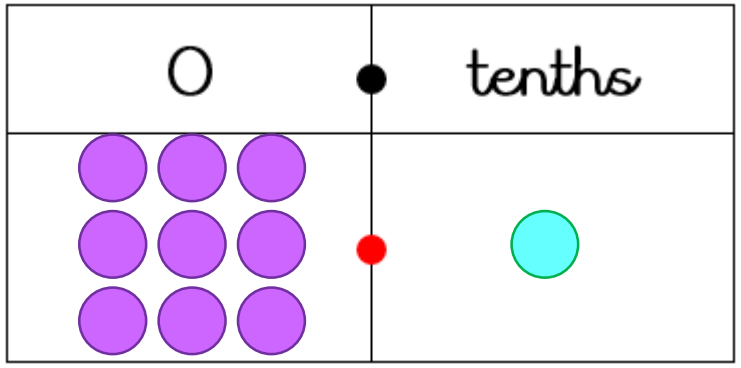
Remember that the decimal point separates the whole number (ONES) from the fractional number (tenths).

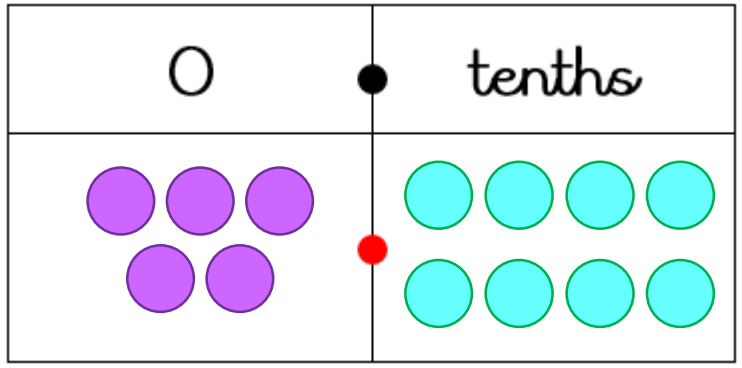
Showing Ones and Tenths on a Place Value Grid

Which **decimals** do these place value grids show?



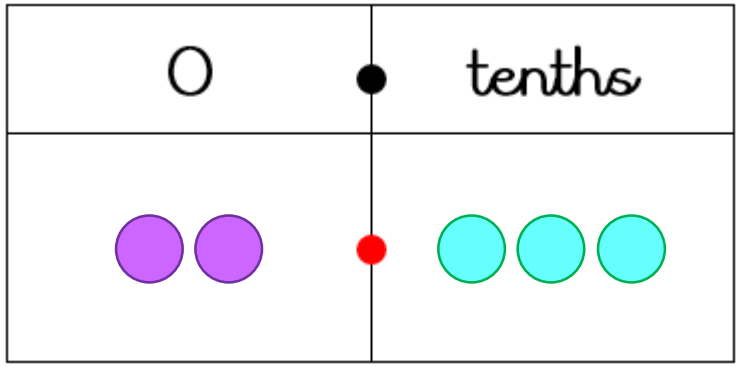




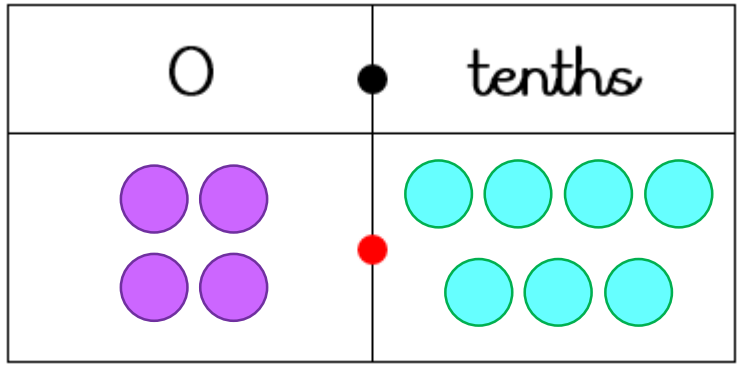


Showing Ones and Tenths on a Place Value Grid

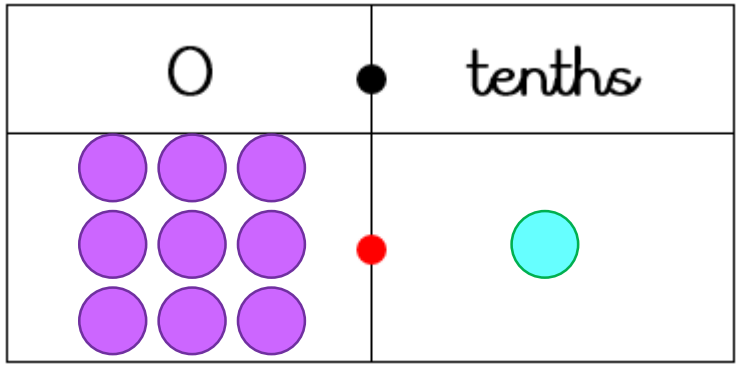
Which **decimals** do these place value grids show?



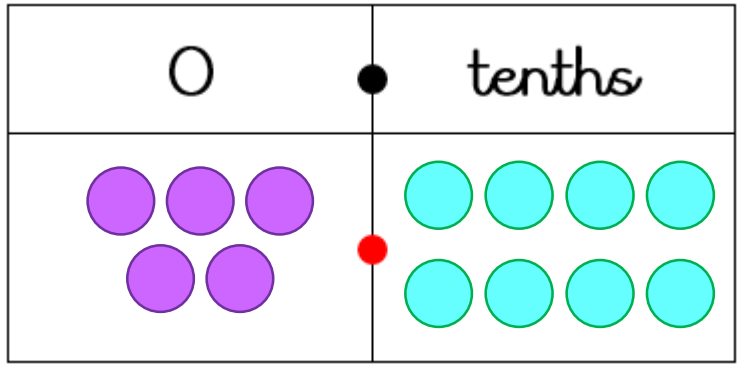
2.3



4.7



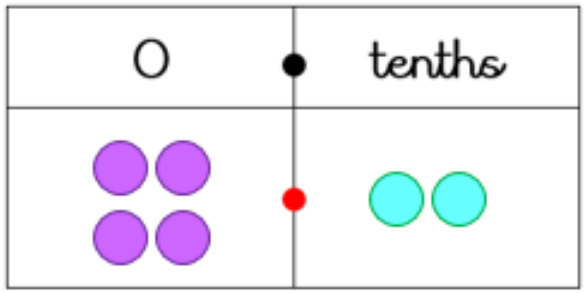
9.1



5.8

Fluency

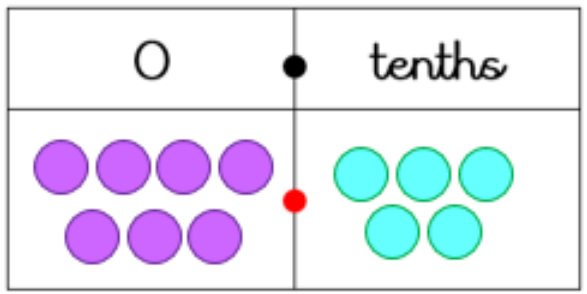
1.



There are _____ ONES and _____ tenths.

As a decimal, this is written as: _____.

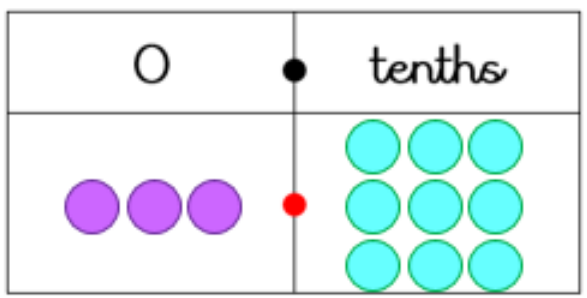
2.



There are _____ ONES and _____ tenths.

As a decimal, this is written as: _____.

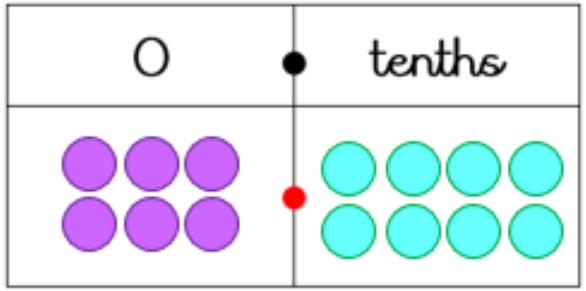
3.



There are _____ ONES and _____ tenths.

As a decimal, this is written as: _____.

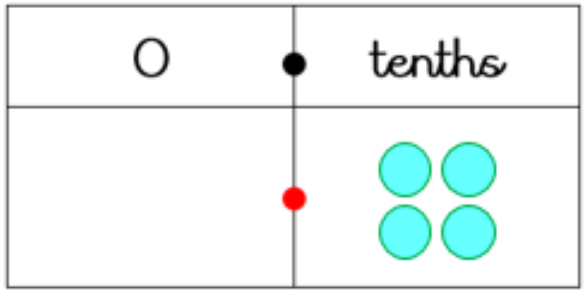
4.



There are _____ ONES and _____ tenths.

As a decimal, this is written as: _____.

5.

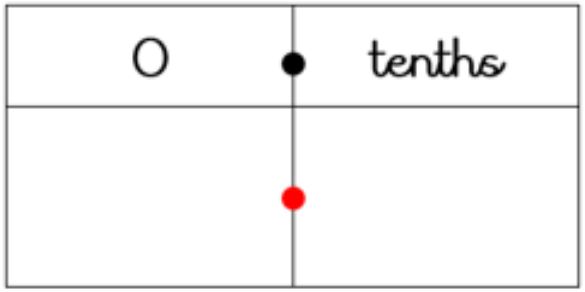


There are _____ ONES and _____ tenths.

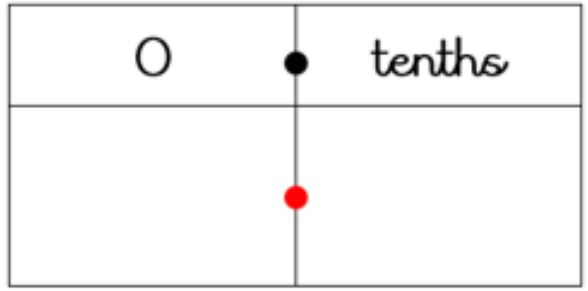
As a decimal, this is written as: _____.

Draw counters to show these decimals on the place value grids:

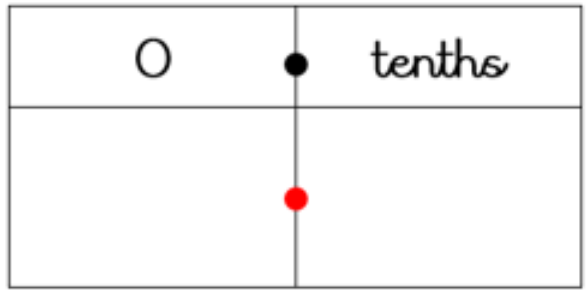
6. 3.5



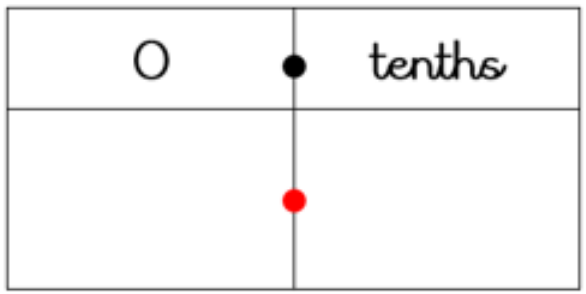
7. 8.4



8. 2.7

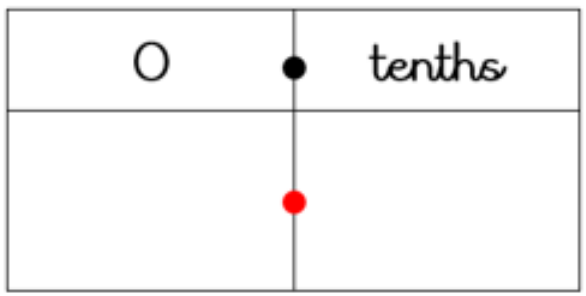


9. 1 ONE and 6 tenths



decimal: _____

10. 5 ONES and 9 tenths



decimal: _____

Reasoning 1

Which representation is the odd one out?

A

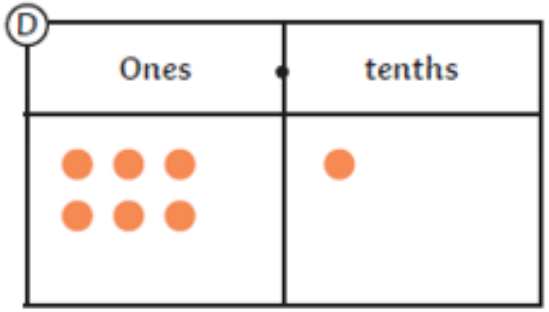
6.1

B

6 ones and
1 tenth

C

D



Explain your reasoning.

Reasoning 2

Oscar is making a number on the place value chart.

There are 9 counters on the left of the decimal point. On the right of the decimal point, there are 2 fewer counters.

ones	tenths

What number has Oscar made? Explain your reasoning.

Reasoning 3

Amir and Rosie are making eleven tenths.

Rosie

Ones	Tenths
	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1

Ones	Tenths
1	0.1

Amir

Who has made the number correctly? Explain your reasoning.

Problem Solving 1

Layla was making a decimal number on this place value chart. Unfortunately, she dropped 4 of her counters on the floor.

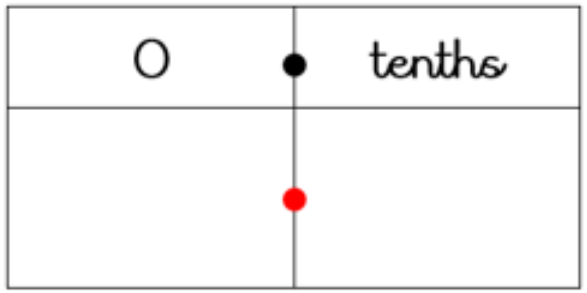
What number could Layla have been making?

Can you find all 5 possible answers?

O	tenths
	● ● ● ● ● ●

Problem Solving 2

Use five counters and the place value grid. You must use all five counters each time and the counters can only be placed in either the ones or the tenths column.



How many different numbers can you make? Record the numbers as **decimals**.

Write a number sentence for each **decimal** you make.

_____ ones + _____ tenths = _____

Problem Solving 3

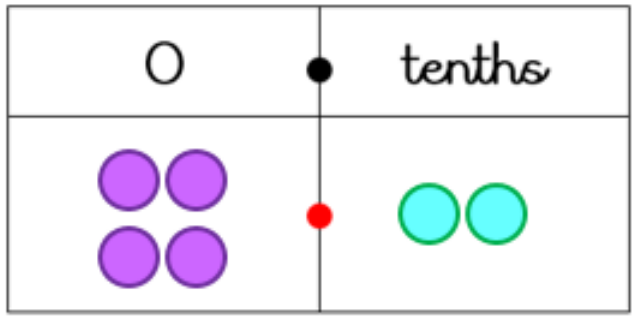
How many different decimal numbers can you make on this place value grid using all eight counters?

O	tenths

Fluency

Answers

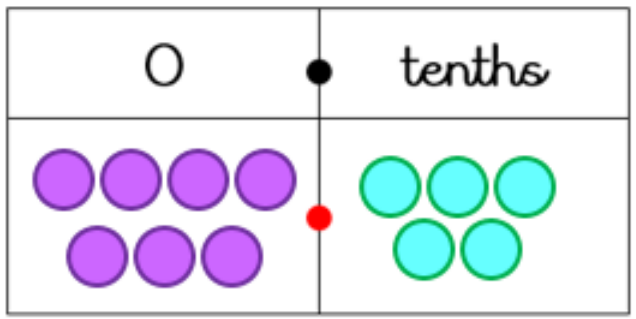
1.



There are 4 ONES and 2 tenths.

As a decimal, this is written as: 4.2

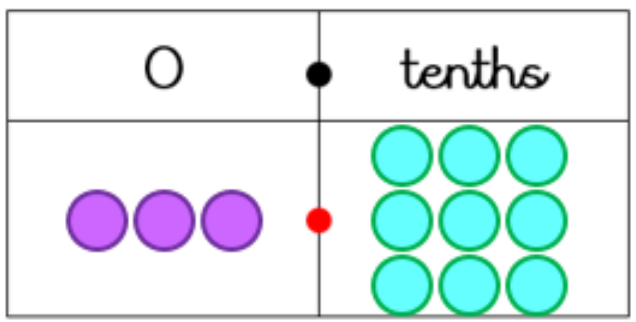
2.



There are 7 ONES and 5 tenths.

As a decimal, this is written as: 7.5

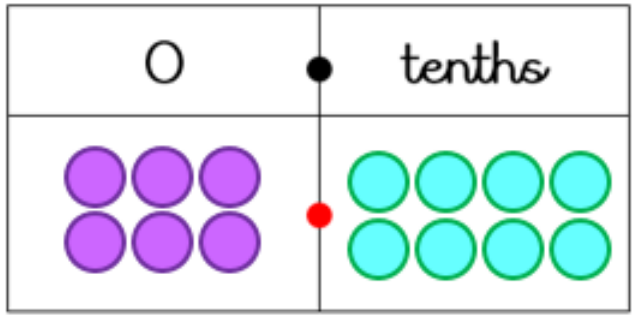
3.



There are 3 ONES and 9 tenths.

As a decimal, this is written as: 3.9

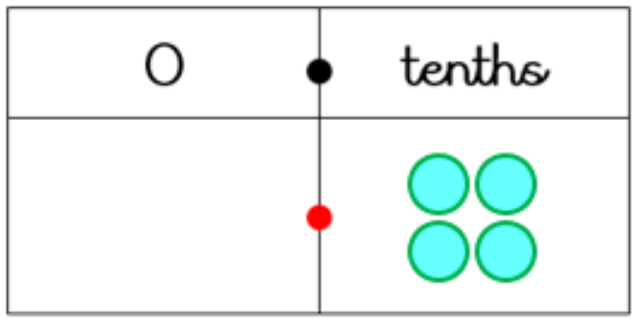
4.



There are 6 ONES and 8 tenths.

As a decimal, this is written as: 6.8

5.

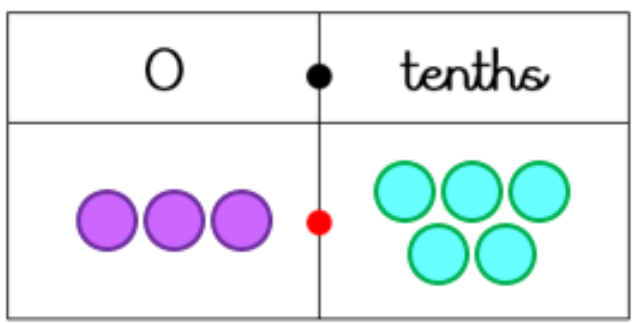


There are 0 ONES and 4 tenths.

As a decimal, this is written as: 0.4

Draw counters to show these decimals on the place value grids:

6. 3.5



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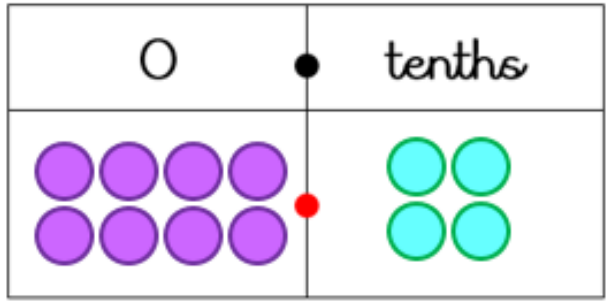
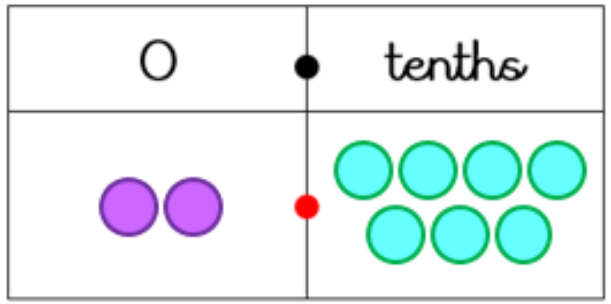
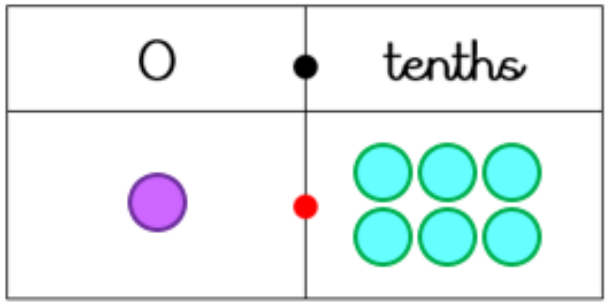


8. 2.7



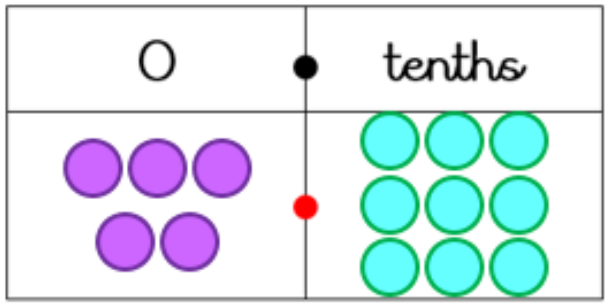
9. 1 ONE and 6 tenths



decimal:

1.6

10. 5 ONES and 9 tenths



decimal:

5.9

Reasoning 1

Representation C is the odd one out because it represents the decimal 5.1

The other three representations, A, B and D, all represent the decimal 6.1

Reasoning 2

Oscar has used 9 counters in the ONES column. In the tenths column, he has used 9 – 2 = 7 counters.

Therefore, he has made the number 9.7

Reasoning 3

Amir and Rosie have both made eleven tenths.

Rosie has recorded her number using 11 tenths counters.

Amir has noticed that 10 tenths is equal to 1 whole. He has exchanged 10 tenths for 1 whole and recorded his number as 1 whole and 1 tenth.

Problem Solving 1

Layla could have made these numbers:

4.6 3.7 2.8 1.9 or $^{10}/_{10}$ (which is 1 whole or 1.0)

Problem Solving 2

Using five counters, these numbers could have been made:

5.0 4.1 3.2 2.3 1.4 or 0.5

These decimals are shown by these number sentences:

5 ones + 0 tenths = 5.0

4 ones + 1 tenths = 4.1

3 ones + 2 tenths = 3.2

2 ones + 3 tenths = 2.3

1 ones + 4 tenths = 1.4

0 ones + 5 tenths = 0.5

Problem Solving 3

Using eight counters, these numbers could have been made:

8.0 7.1 6.2 5.3 4.4 3.5 2.6

1.7 0.8