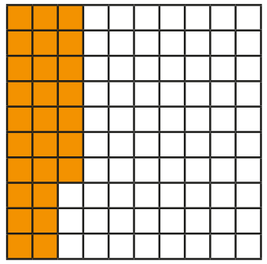
Make a whole

1 Here is a hundred square.



a) How many hundredths are shaded? ☐

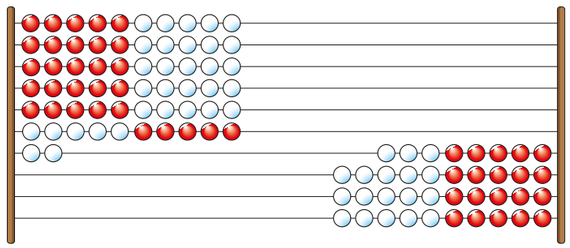
b) How many more hundredths do you need to shade so that the whole hundred square is shaded? ☐

c) Complete the sentence.

☐ hundredths + ☐ hundredths = 1 whole

2 Here is a Rekenrek with 100 beads.

Each bead is one hundredth of the whole.



Complete the sentences.

a) ☐ hundredths are on the left.

b) ☐ hundredths are on the right.

c) ☐ + ☐ = 1

3 Fill in the missing digits.

a) 1 tenth = ☐ hundredths

b) $\frac{2}{10} = \frac{\square}{100}$

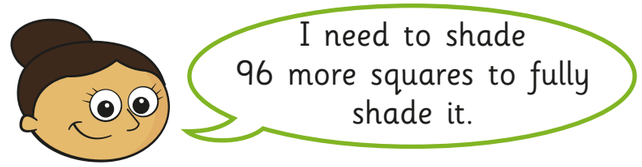
c) 70 hundredths = ☐ tenths

d) 32 hundredths = ☐

e) 0.4 = ☐ tenths

f) 50 hundredths = ☐

4 Dora has shaded 4 tenths of a hundred square.

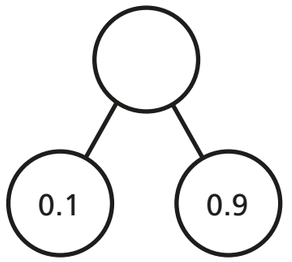


Do you agree with Dora? _____

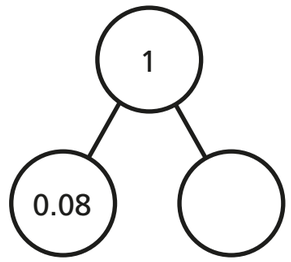
Explain your reasoning.

5 Complete the part-whole models.

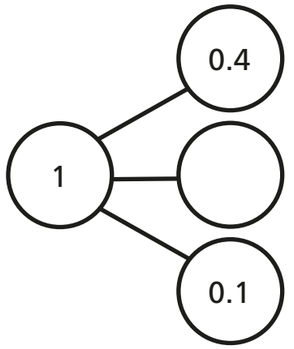
a)



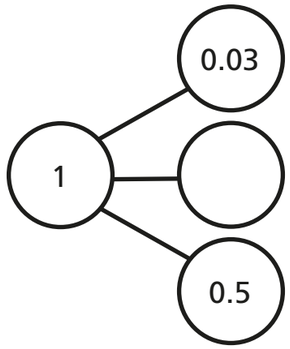
c)



b)



d)



6 Tick the calculations that do **not** sum to 1

0.4 + 0.6 ☐	0.4 + 0.06 ☑	0.04 + 0.06 ☑
0.8 + 0.92 ☑	0.08 + 0.92 ☐	0.92 + 0.08 ☐

How did you work this out?

7 Mo has a metre-long piece of ribbon.

He cuts off a piece of ribbon 24 cm long.

What is the length of the remaining ribbon?

The length of the remaining ribbon is [0·76] m.

8 Fill in the missing numbers.

a) 0.1 + [0·9] = 1

b) [0·99] + 0.01 = 1

c) 0.03 + [0·97] = 1

d) 0.15 + 0.64 + [0·21] = 1

e) 0.15 + [0·2] + 0.65 = 1

f) [0·46] + 0.04 + 0.5 = 1

9 Two identical bead strings have a total length of 64 cm.

Would the total length of three of these bead strings be longer or shorter than a metre? Shorter

Explain how you know.

1 bead string is 0·32 m

3 × 0·32 = 0·96 m 0·96 m < 1 m

10 Here are eight number cards.

$\frac{6}{10}$ $\frac{19}{100}$ 0.2 0.5 $\frac{8}{10}$ 0.01 $\frac{30}{100}$ 0.4

Use the number cards to make each calculation correct.

You can use each number once only.

$\frac{6}{10}$ + [0·4] = 1

$\frac{8}{10}$ + $\frac{19}{100}$ + [0·01] = 1

[0·5] + [0·2] + $\frac{30}{100}$ = 1

How many other ways can you find to make a total of 1?

Write decimals

1 Make the number represented on each of the place value charts.

Complete the sentences to describe each number.

a)

Ones	Tenths	Hundredths
1 1 1	0.1 0.1	0.01 0.01 0.01 0.01 0.01

There are [3] ones, [2] tenths and [5] hundredths.

The number is [3.25]

b)

Ones	Tenths	Hundredths
	0.1 0.1 0.1 0.1 0.1	0.01 0.01 0.01 0.01 0.01

There are [0] ones, [5] tenths and [5] hundredths.

The number is [0.55]

c)

Ones	Tenths	Hundredths
1 1 1		0.01 0.01 0.01 0.01 0.01 0.01 0.01

There are [3] ones, [0] tenths and [7] hundredths.

The number is [3.07]

d)

Ones	Tenths	Hundredths
1 1 1	0.1 0.1 0.1 0.1 0.1 0.1	

There are [3] ones, [7] tenths and [0] hundredths.

The number is [3.7]

2 Make each number on a place value chart.

Write the value of the underlined digit.

a) 6.3̲1 [3 tenths]

b) 1̲2.09 [2 ones]

c) 0.0̲7 [7 hundredths]

d) 5̲6.82 [5 tens]

3 Alex says the number on the place value chart is 3.4

Ones	Tenths	Hundredths

Do you agree with Alex? [No]

Explain your answer.

4 Fill in the zeros needed as placeholders for each number.

a)

T	O	Tths	Hths
3	2	0	4

b)

T	O	Tths	Hths
	2	0	4

c)

T	O	Tths	Hths
	0	0	4

d)

T	O	Tths	Hths
	0	5	

e)

T	O	Tths	Hths
	2		

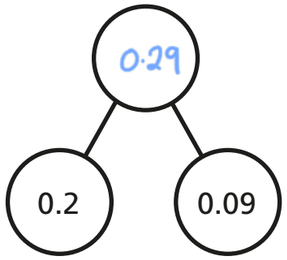
f)

T	O	Tths	Hths
3	0	5	

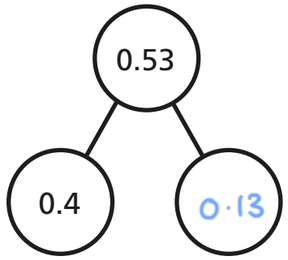
Compare answers with a partner.

5 Complete the part-whole models.

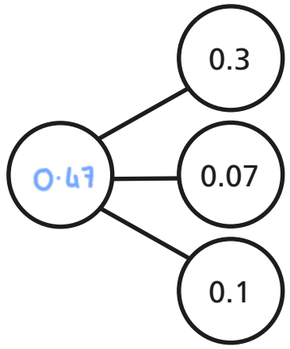
a)



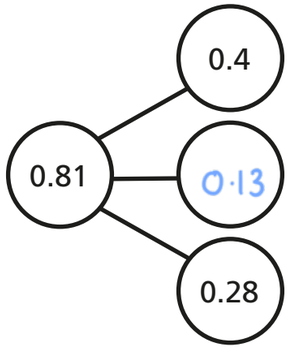
c)



b)

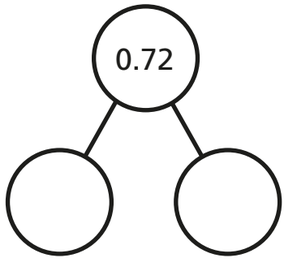


d)



6 Here is a part-whole model.

Partition 0.72 in three different ways and complete the number sentences.



e.g

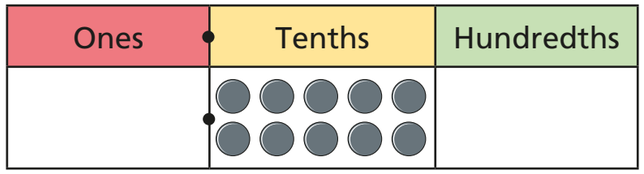
0·7 + 0·02 = 0.72

0·6 + 0·12 = 0.72

0·5 + 0·22 = 0.72

7 Eva is asked to show 10 tenths on a place value chart.

Here is her answer.



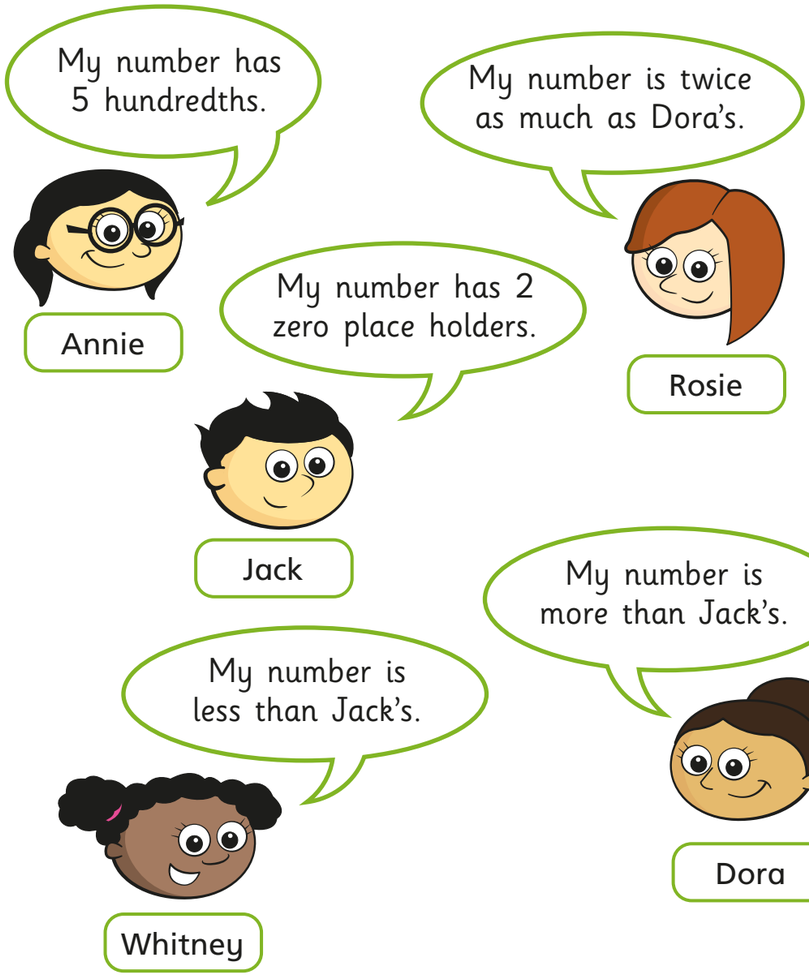
Is Eva correct?

8 Here are five number cards.

Annie, Rosie, Jack, Dora and Whitney take one card each.

0.06	0.4	0.2	0.05	0.03

Use the clues to work out which number they each have.



Annie 0·05 Dora 0·2 Whitney 0·03

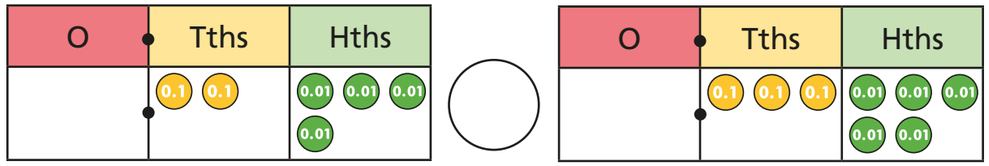
Rosie 0·4 Jack 0·06

Did your partner use the same method?

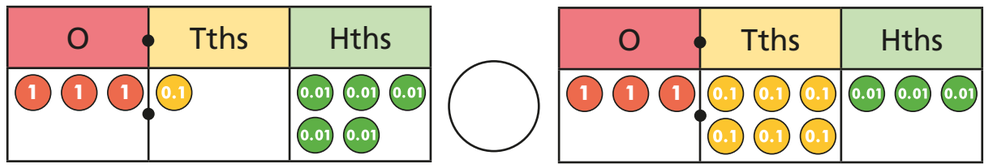
Compare decimals

1 Write < or > to compare the decimals.

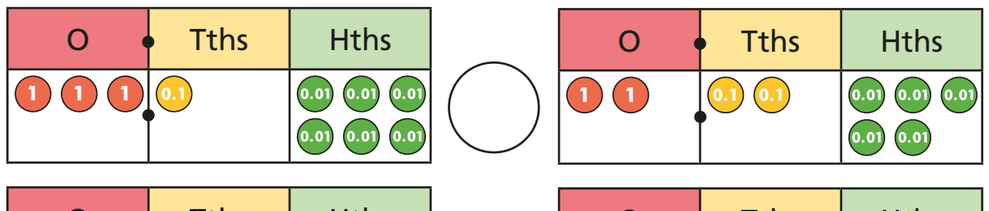
a)



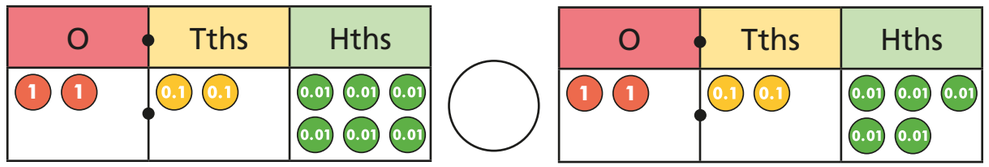
b)



c)



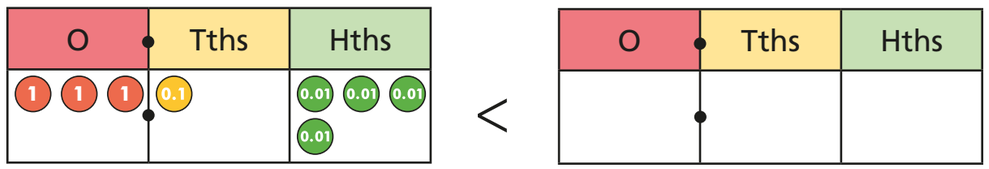
d)



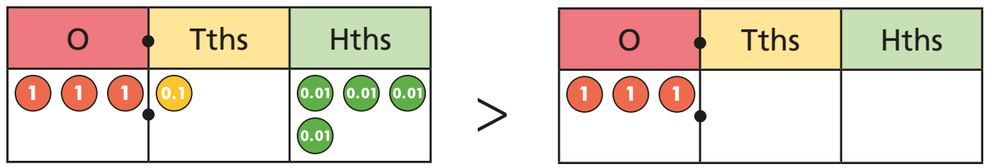
Did you have to compare all the columns for every question?

2 Draw counters to make the statements correct.

a)



b)



3 Write < or > to compare the decimals.

a)

O	Tths	Hths		O	Tths	Hths
7	6	8	◯	7	0	2

b)

O	Tths	Hths		O	Tths	Hths
3	2	5	◯	3	9	6

c)

O	Tths	Hths		O	Tths	Hths
0	4	1	◯	0	2	9

d)

O	Tths	Hths		O	Tths	Hths
1	0	3	◯	1	2	0

e)

O	Tths	Hths		O	Tths	Hths
2	7	2	◯	2	7	1

4 Complete the place value charts to make the statements correct.

a)

O	Tths	Hths		O	Tths	Hths
6	2	8	<			

b)

O	Tths	Hths		O	Tths	Hths
3	2	6	>	3		

c)

O	Tths	Hths		O	Tths	Hths
9	9	8	<			

d)

O	Tths	Hths		O	Tths	Hths
1	4	6	>		8	

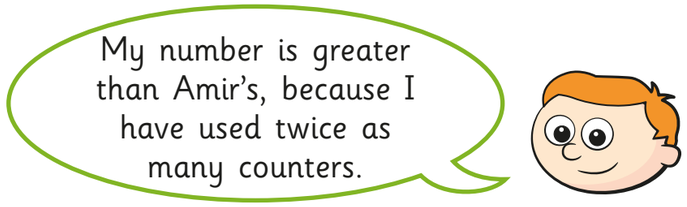
5 Ron and Amir have each made a number using counters on a place value chart.

Ron's looks like this:

Ones	Tenths	Hundredths
	●●●●	●●

Amir's looks like this:

Ones	Tenths	Hundredths
●●●		



Do you agree with Ron? NO

Explain your reasoning.

6 Draw exactly 8 counters in each chart to represent a number that matches each statement. e.g.

a) a number less than 0.76

Ones	Tenths	Hundredths
	●●●●●●	●●

b) a number more than 5.74

Ones	Tenths	Hundredths
●●●●●●	●●	

c) a number between 5.13 and 5.29

Ones	Tenths	Hundredths
●●●●●	●●	●

How many different answers are there for each statement?

7 Write < or > to compare the numbers.

a) 3.2 < 3.8

b) 1.46 > 1.43

c) 1 > 0.99

d) 0.16 < 0.8

8 Fill in the missing digits to make the statements correct. e.g.

a) 0.34 < 0.3<u>5</u>

b) 2.42 > 2.4<u>1</u>

c) 0.74 < 0.<u>8</u>2

d) 1.3<u>1</u> < 1.3<u>2</u>

e) 2.<u>4</u>2 > 2.<u>3</u>2

f) 0.8<u>9</u> < 0.<u>9</u>9

Is there more than one answer for each?

9 Here are four digit cards.

7	0	3	1

Use each digit card once to make this statement correct.

e.g. 7.0 > 3.1

How many possible answers are there?

Order decimals

1 Here are four numbers on place value charts.

a) What number is represented in each place value chart?

A

Ones	Tenths	Hundredths
1 1 1	0.1	0.01 0.01 0.01 0.01

3.14

B

Ones	Tenths	Hundredths
1 1 1 1	0.1	0.01 0.01 0.01 0.01

4.14

C

Ones	Tenths	Hundredths
1 1 1	0.1	0.01 0.01 0.01 0.01 0.01

3.15

D

Ones	Tenths	Hundredths
1 1 1	0.1 0.1	0.01 0.01 0.01

3.23

b) Write the numbers in ascending order.

3.14, 3.15, 3.23, 4.14

smallest greatest

2 **a)** Write digits to show the number represented in each place value chart.

O	Tths	Hths
1	0.1 0.1 0.1 0.1	0.01 0.01
1	4	2

O	Tths	Hths
1 1		0.01 0.01 0.01 0.01 0.01 0.01
2	0	6

O	Tths	Hths
1 1	0.1 0.1 0.1	
2	3	

O	Tths	Hths
1	0.1 0.1 0.1	0.01 0.01 0.01
1	3	3

b) Write the numbers in ascending order.

1.33, 1.42, 2.06, 2.3

3 Write the numbers in descending order.

1.42 **4.12** **1.24** **2.41**

4.12, 2.41, 1.42, 1.24

4 Teddy's teacher asks him to put some numbers in ascending order.

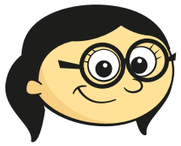
Here is his answer.

0.64 12.7 2.83

Do you agree with Teddy? No

Talk about it with a partner.

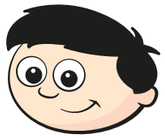
5 Annie and Dexter are comparing the decimals 4.12 and 4.8



Annie

4.12 is greater than 4.8, because 12 is bigger than 8

4.12 is smaller than 4.8, because 12 hundredths is less than 8 tenths.



Dexter

Who do you agree with? Dexter

Explain your answer.

6 Write < or > to complete the statements.

Decide whether the numbers are ascending or descending in each part.

a) 3.2 < 3.8 < 3.9 ascending

b) 0.41 > 0.38 > 0.25 descending

c) 4.2 > 4.17 > 4.085 descending

7 Write the numbers in ascending order.

a) 2.38 0.97 1.45 1.81

0·97, 1·45, 1·81, 2·38

b) 0.64 0.7 0.09 0.46

0·09, 0·46, 0·64, 0·7

c) 12.3 2 7.83 0.99

0·99, 2, 7·83, 12·3

8 Tommy, Ron, Amir, Dora and Eva have measured their heights.

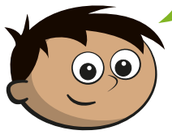
My height is 145 cm.

Tommy

I am 1.4 m tall.

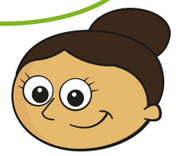
Ron

I am 10 cm taller than Ron.

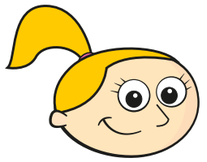


Amir

My height is 1.38 m.



Dora



Eva

I am 146 cm tall.

Write the children's names in order from shortest to tallest.

Dora, Ron, Tommy, Eva, Amir

9 Here are two lists of numbers.

Use the digits 0 to 9 once each to complete the lists. e.g.

ascending order	0.41	2.41	7.39	9.41
descending order	8.41	7.49	6.41	5.47

Compare answers with a partner.

Is there more than one way to complete each list?