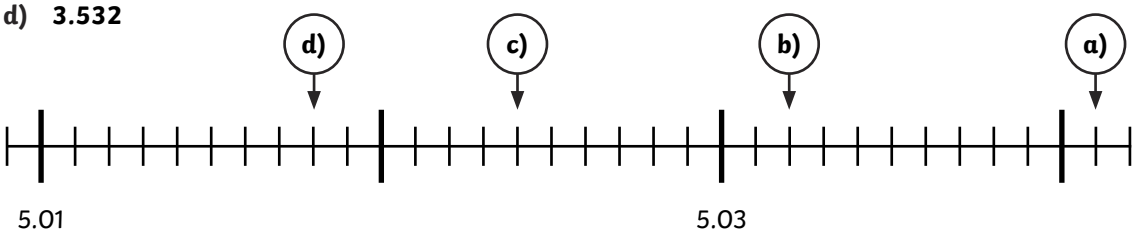
1) a) **4.026**

b) **3.406**

c) **1.212**

d) **3.532**

2)



3) a) $3\frac{512}{1000}$ c) $1\frac{36}{1000}$

b) $4\frac{506}{1000}$ d) $3\frac{7}{1000}$

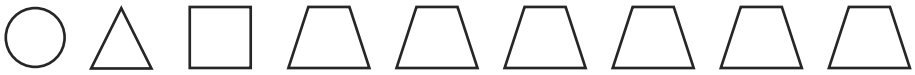
1) **Dennis is incorrect.** $\frac{1000}{1000}$ **has a value of 1. Therefore,** $\frac{3401}{1000}$ **has 1 whole, 4 tenths, 0 hundredths and 1 thousandth.** $\frac{3401}{1000}$ **as a decimal is 3.401.**

2) **The errors are:**

a) $\frac{234}{1000}$ **– this should be** $\frac{2304}{1000}$

f) **2.340 - this should be 2.304**

1) a) 1.116 $\frac{116}{1000}$



b) 6.111 6 $\frac{111}{1000}$

2) There are 2 possible numbers:

1.412

1.124

3) Callum's number has 3 more thousandths, 2 less hundredths and 1 more tenth than Luke.

Possible solutions are:

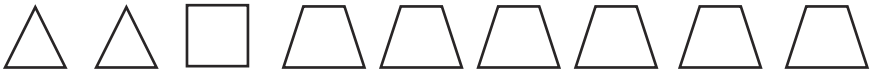
Callum – 0.324

Luke – 2.241

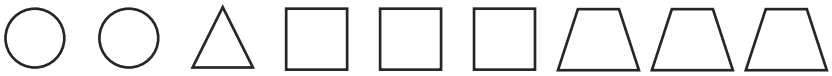
Callum - 0.405

Luke – 2.322

Callum - 0.216



Luke – 2.133

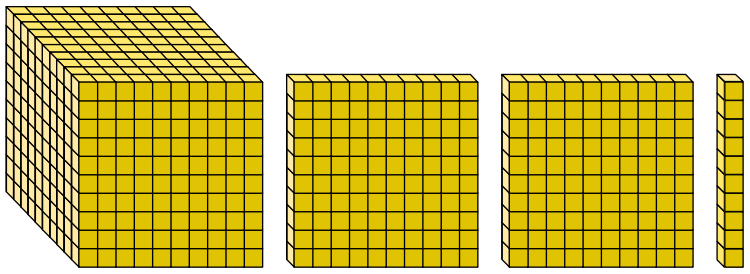


1) Write these numbers as decimals.

a) $4\frac{26}{1000}$ = _____

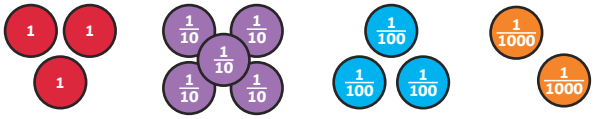
b) 3 ones, 4 tenths and 6 thousandths = _____

c)



= _____

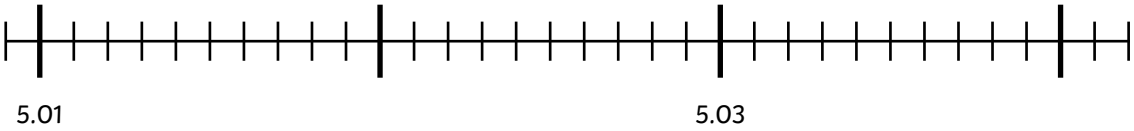
d)



= _____

2) Draw arrows and write labels to show where these decimal numbers would go on the number line.

a) 5.041 **b)** 5.032 **c)** 5.024 **d)** 5.018



3) Write these decimal numbers as mixed numbers.

a) 3.512 = _____

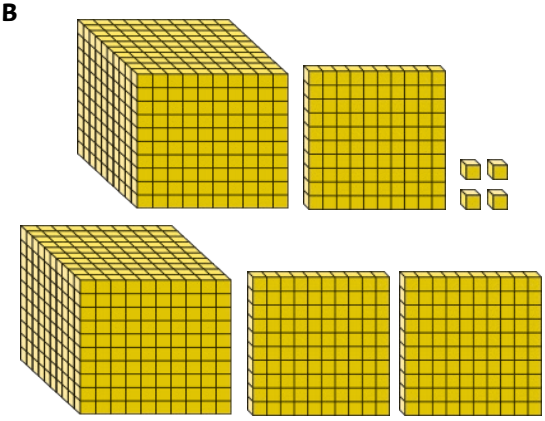
b) 4.506 = _____

c) 1.036 = _____

d) 3.007 = _____

1) Dennis says $\frac{3401}{1000}$ as a decimal is 0.3401. Do you agree? Explain your thinking.

2) Here is a table showing the same decimal number in different ways. There are 2 mistakes in the table. Identify them and work out the correct answer.

A $\frac{234}{1000}$	**D** 2 + 0.3 + 0.004
B 	**E** 2 ones, 3 tenths and 4 thousandths
C $2 + \frac{3}{10} + \frac{4}{1000}$	**F** 2.340

1) Here are 4 shapes and their values.

a) Using at least one of each shape and 9 shapes in total, what is smallest number you can make? Show in shapes, as a decimal and as a mixed number.

b) Using at least one of each shape and 9 shapes in total, what is largest number you can make? Show in shapes, as a decimal and as a mixed number.

2) Shaughna says, "My number is greater than 1 but less than 2. I have at least one of each shape. I have used 8 shapes in total. The hundredths digit is half of the thousandths digit."

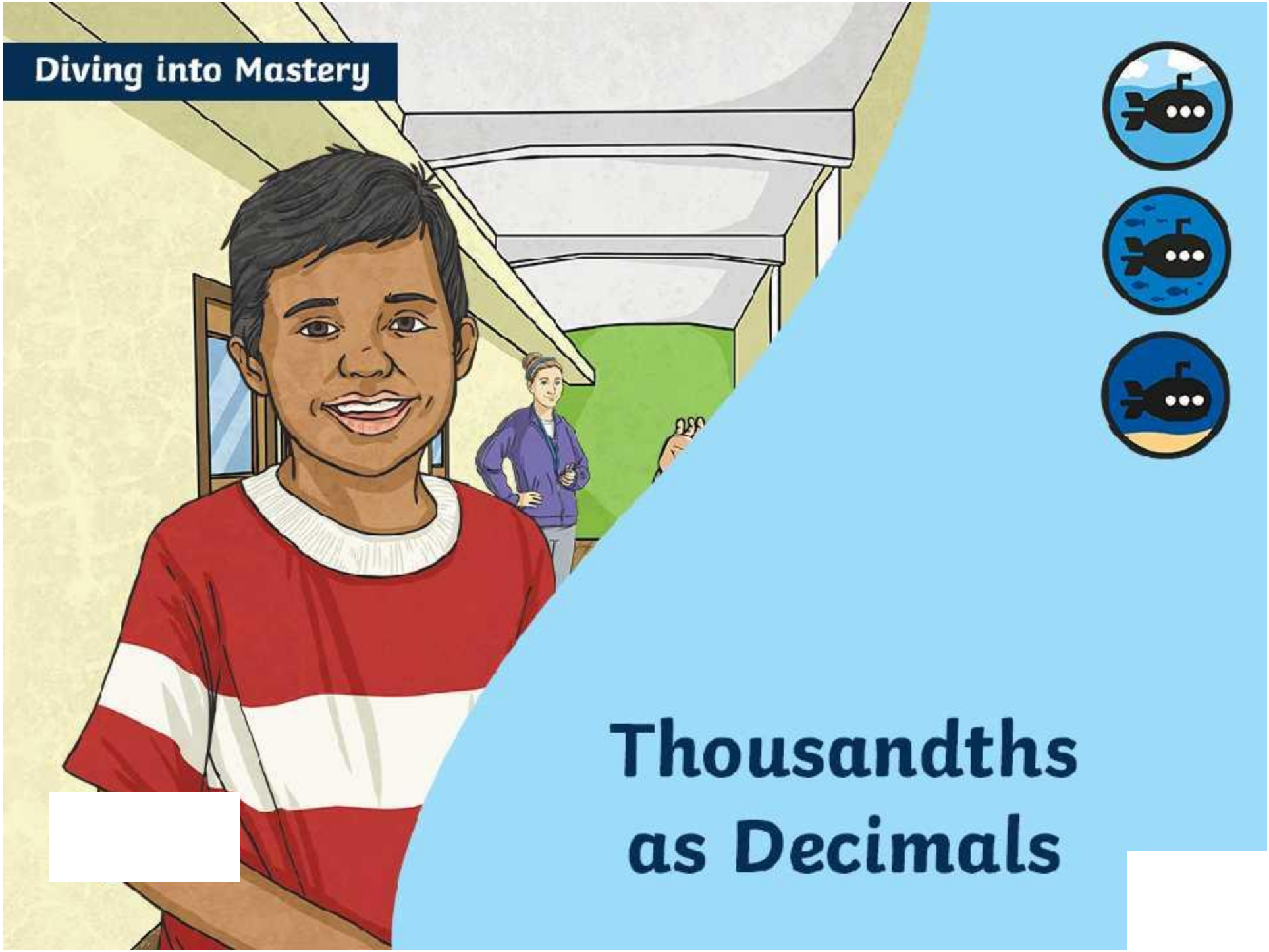
What could her number be? Find all possible solutions and record with shapes and as a decimal number. You may need to use extra paper to record your answer.

3) Callum and Luke are comparing numbers. Looking at the digits, Callum says his number has 3 more trapeziums, 2 less squares and 1 more triangle than Luke.

Both numbers have 9 shapes each.

What could their numbers be? Find 3 possible pairs of numbers recorded as decimals and shapes.

You may need to use extra paper to record your answer.


Diving into Mastery
Thousandths as Decimals

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

Diving

Deeper

Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.

Thousandths as Decimals | Diving

What decimal number is shown?

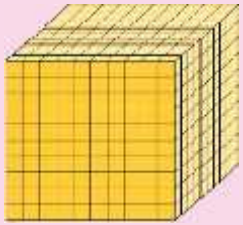
a

0.468

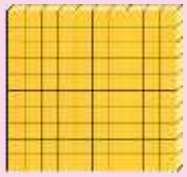
b

2.322

Key



= 1 whole



= 1 tenth

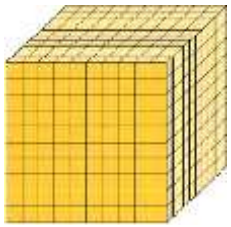
= 1 hundredth

= 1 thousandth

d

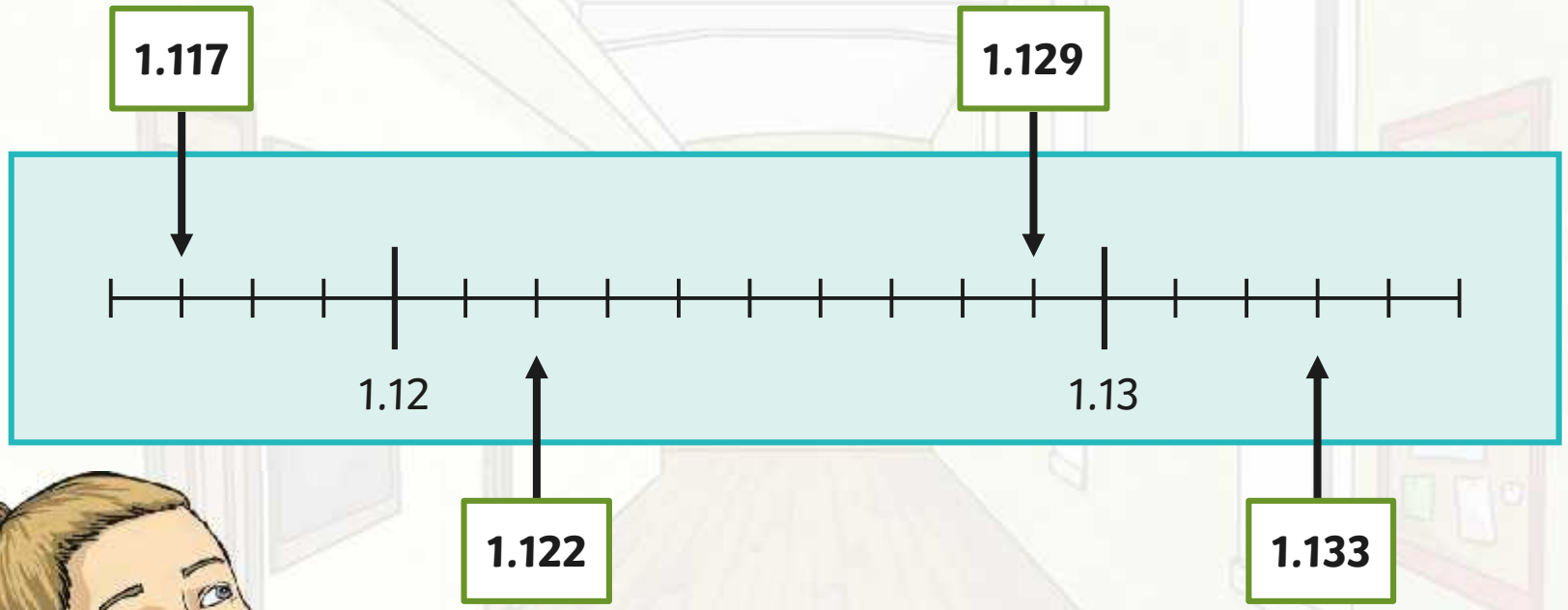
Click here for key

1.311



Thousandths as Decimals | Diving

What decimal number is each arrow pointing to?



Thousandths as Decimals | Diving

Write these decimal numbers as mixed numbers:

2.603	$2\frac{603}{1000}$
2.063	$2\frac{63}{1000}$
0.632	$\frac{632}{1000}$

Thousandths as Decimals | Deeper

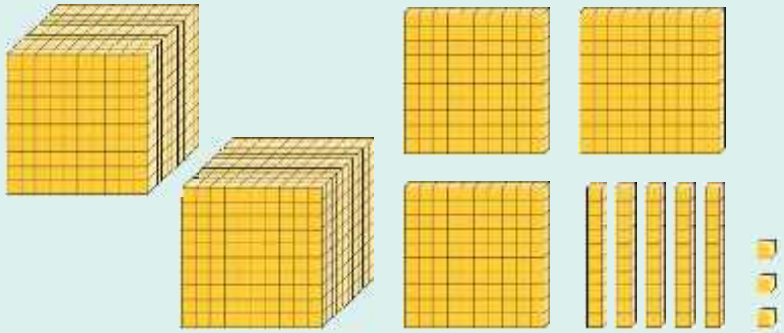
Do you agree? Explain your thinking.

Dennis is incorrect. $\frac{1000}{1000}$ = 1. Therefore $\frac{1324}{1000}$ = 1.324 as a decimal number.

Thousandths as Decimals | Deeper

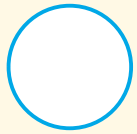
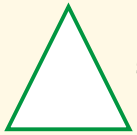
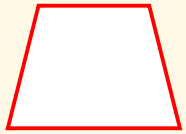
Here is a table showing the same decimal number in different ways.
There are 2 mistakes in the table.

Identify them and work out the correct answer.

2.353		$2 + 0.3 + 0.05 + 0.03$ **This should be** **$2 + 0.3 + 0.05 + 0.003$**
$\frac{2353}{1000}$	2 ones, three tenths, five hundredths and three thousandths.	$2 + \frac{2353}{1000}$ **This should be** **$2 + \frac{353}{1000}$**

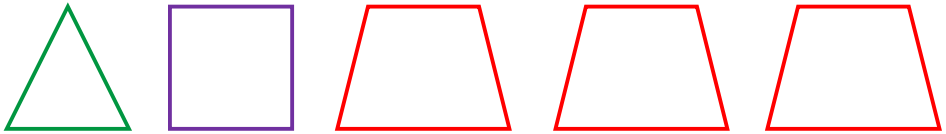
Thousandths as Decimals | **Deepest**

Here are four shapes and their values:

 = 1  = $\frac{1}{10}$ = $\frac{1}{100}$  = $\frac{1}{1000}$

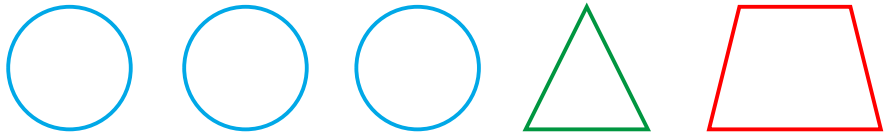
I have a decimal number with thousandths. Using a mix of 3 different shapes and overall 5 shapes, what is the smallest number you can make?

0.113



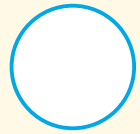
I have a decimal number with thousandths. Using a mix of 3 different shapes and overall 5 shapes, what is the largest number you can make?

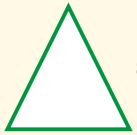
3.101



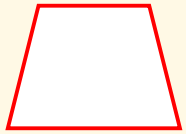
Thousandths as Decimals | Deepest

Here are four shapes and their values:

 = 1

 = $\frac{1}{10}$

= $\frac{1}{100}$

 = $\frac{1}{1000}$

What is Shaughna's number? What shapes has she used?

0.231

Thousandths as Decimals | Deepest

Callum and Luke are comparing numbers. Looking at the digits, Callum says his number has 1 more trapezium, 3 less squares and 2 more triangles than Luke.

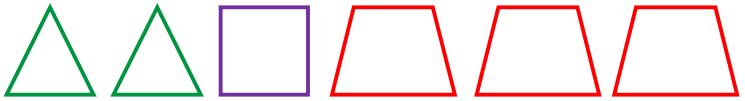
Both have 6 shapes each.

What could their numbers be?

Find 2 possible pairs of numbers recorded as decimals and shapes.

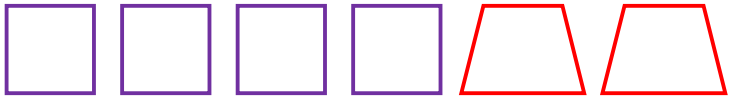
Callum 0.312

Callum 0.213



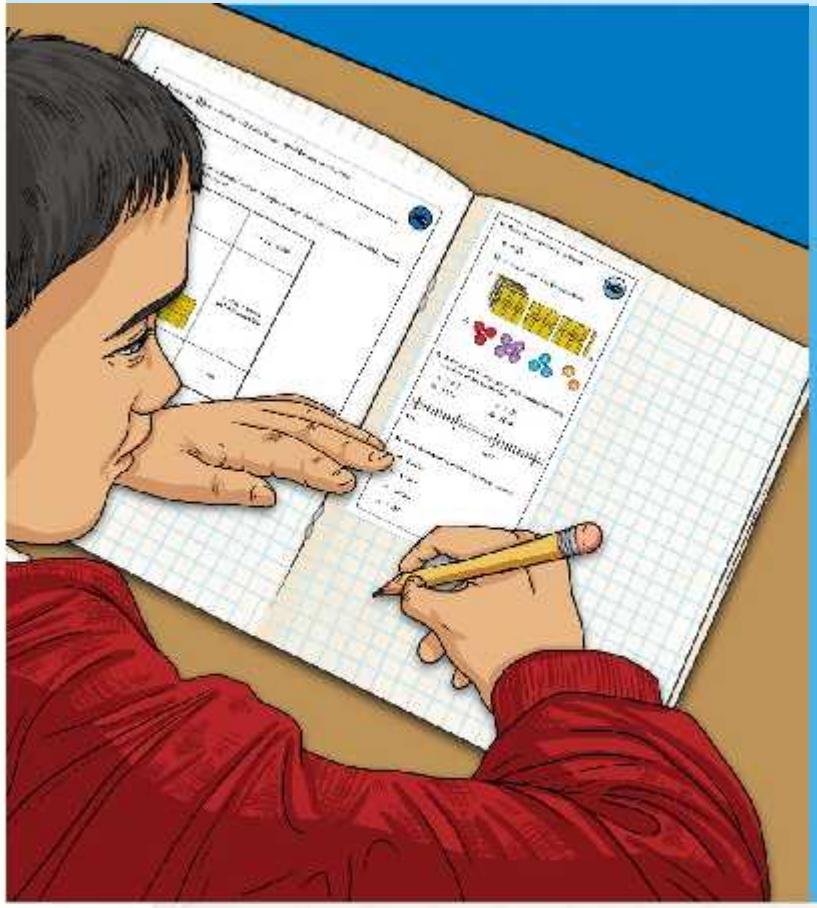
Luke 0.141

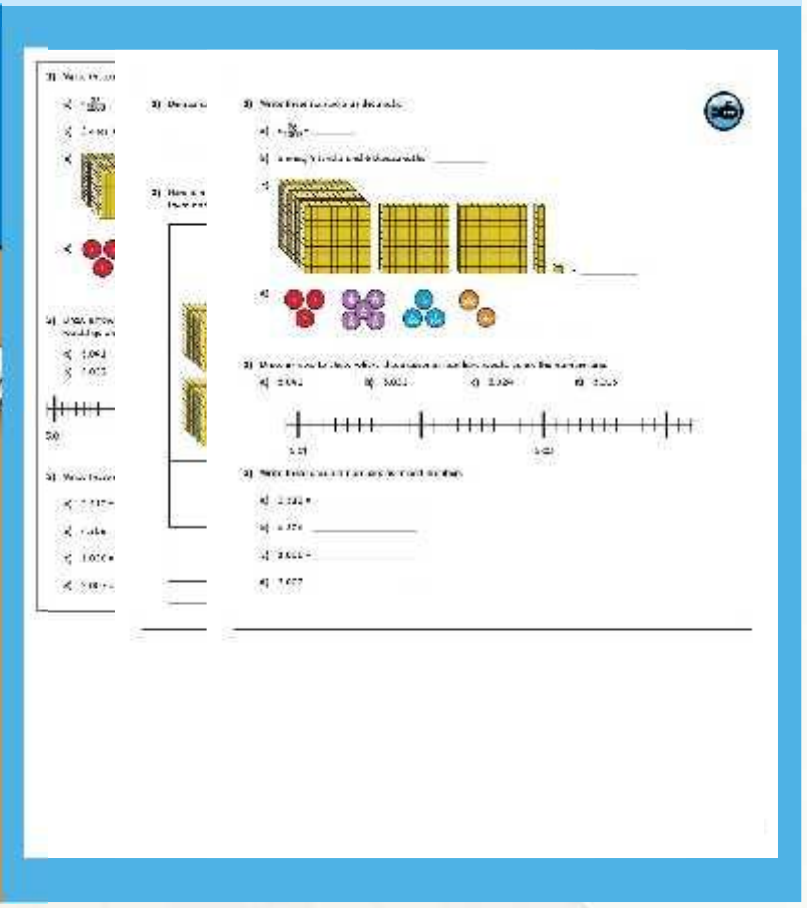
Luke 0.042



Thousandths as Decimals

Dive in by completing your own activity!



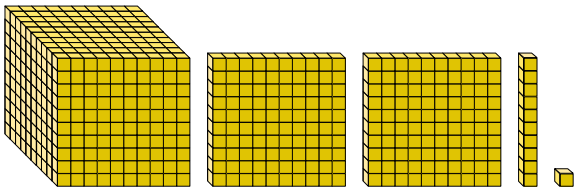


1) Write these numbers as decimals.

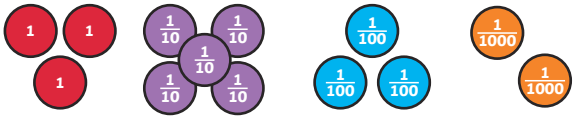
a) $4\frac{26}{1000}$

b) 3 ones, 4 tenths and 6 thousandths

c)



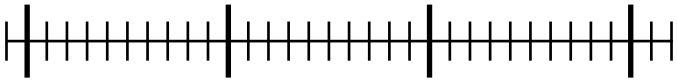
d)



2) Draw arrows and write labels to show where these decimal numbers would go on the number line.

a) 5.041 **c)** 5.024

b) 5.032 **d)** 5.018



3) Write these decimal numbers as mixed numbers.

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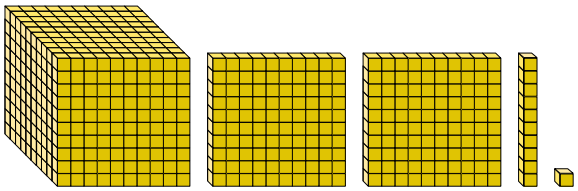
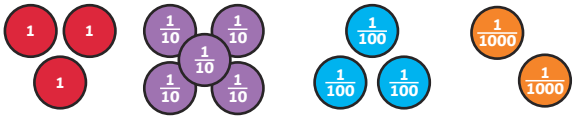


d)



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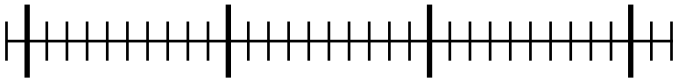

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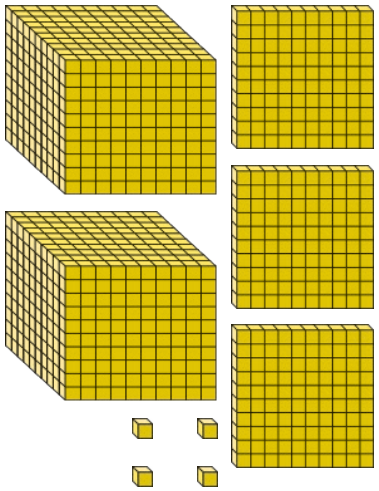
1) Dennis says $\frac{3401}{1000}$ as a decimal is 0.3401
Do you agree? Explain your thinking.

2) Here is a table showing the same decimal number in different ways. There are 2 mistakes in the table. Identify them and work out the correct answer.

A $\frac{234}{1000}$	**D** 2 + 0.3 + 0.004
B 	**E** 2 ones, 3 tenths and 4 thousandths
C $2 + \frac{3}{10} + \frac{4}{1000}$	**F** 2.340

1) Dennis says $\frac{3401}{1000}$ as a decimal is 0.3401
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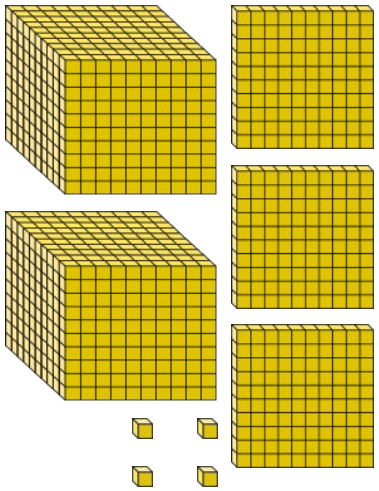
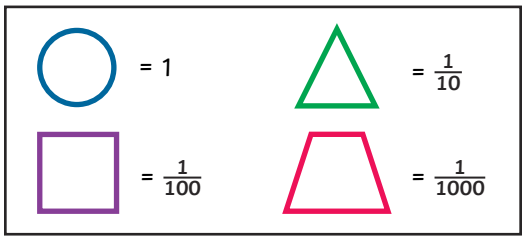
B 	**E** 2 ones, 3 tenths and 4 thousandths
C $2 + \frac{3}{10} + \frac{4}{1000}$	**F** 2.340

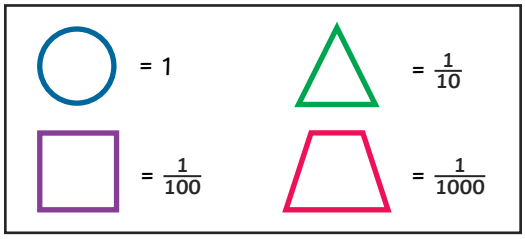
1) Here are 4 shapes and their values.



a) Using at least one of each shape and 9 shapes in total, what is smallest number you can make? Show in shapes, as a decimal and as a mixed number.

b) Using at least one of each shape and 9 shapes in total, what is largest number you can make? Show in shapes, as a decimal and as a mixed number.

2) Shaughna says, "My number is greater than 1 but less than 2. I have at least one of each shape. I have used 8 shapes in total. The hundredths digit is half of the thousandths digit."



What could her number be? Find all possible solutions and record with shapes and as a decimal number.

3) Callum and Luke are comparing numbers. Looking at the digits, Callum says his number has 3 more trapeziums, 2 less squares and 1 more triangle than Luke.

Both numbers have 9 shapes each.

What could their numbers be?

Find 3 possible pairs of numbers recorded as decimals and shapes.

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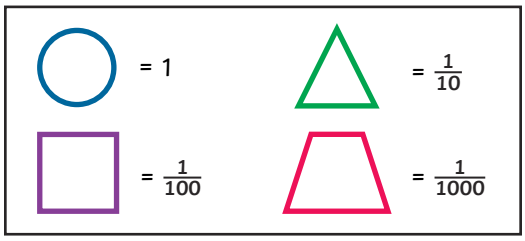

a) Using at least one of each shape and 9 shapes in total, what is smallest number you can make? Show in shapes, as a decimal and as a mixed number.

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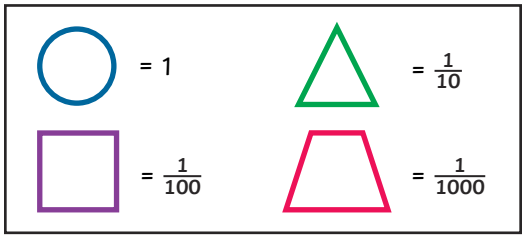

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