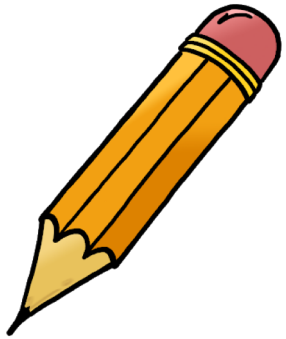
Year 6

Thursday 21st May 2020

Maths

LO: decimals as fractions

Please note: this link only works on either pdf or the link above this powerpoint.
The video lesson is available here – Summer Term - Week 5 - lesson 4

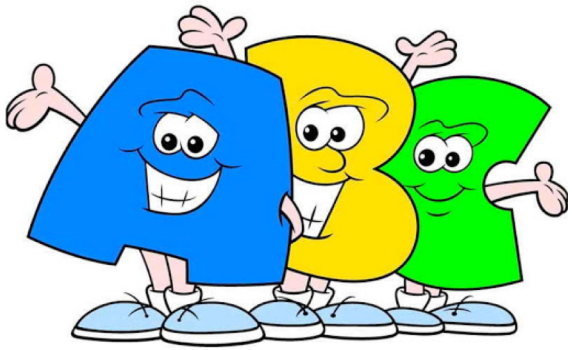


Brain Melter!

Write out the numbers from 1 to 20 in words:

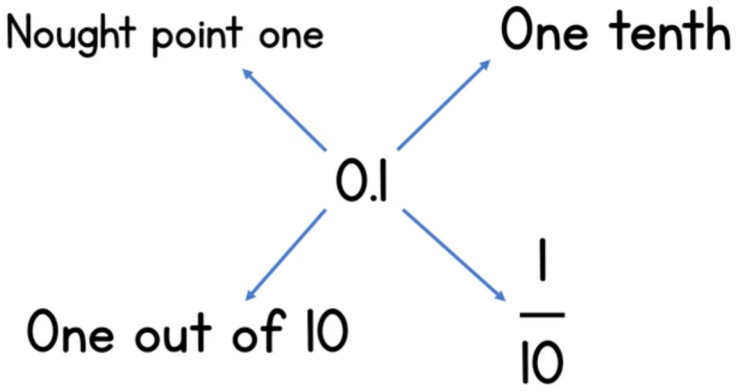
One, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty.

Now put them in ALPHABETICAL order.
Which number stays where it is?



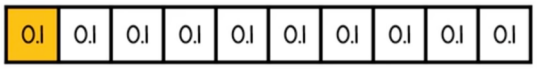
Example:

0.1 is a decimal number. The one is in the tenths column. This means it is one tenth. Which is 1 over 10 as a fraction, or 1 out of 10.



If one tenth is the same as one out of ten. Then 6 out of ten must be 6 tenths or 0.6 and three out of ten must be 3 tenths or 0.3.

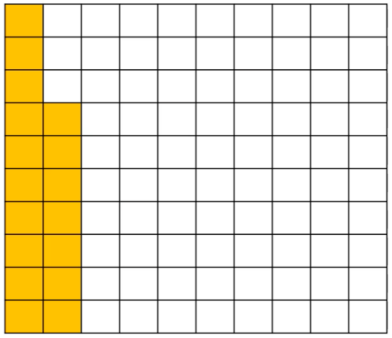
$\frac{1}{10}$



$\frac{1}{10} = 0.1$

$\frac{6}{10} = \square$ $\frac{\square}{10} = 0.3$

Or:



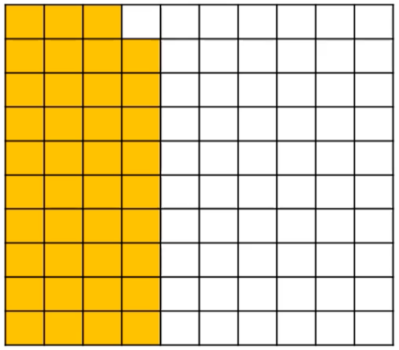
= seventeen hundredths

$= \frac{17}{100}$

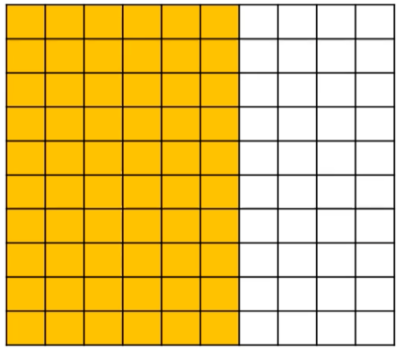
$\frac{10}{100} = 0.1$

I can use this fact to understand that 17/100ths is 0.17

1: Look at these hundred squares. How many cubes – out of 100 - are yellow?



$\frac{\square}{100} = \square$



$\frac{\square}{100} = \square$

2:

$\frac{1}{10}$

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

$\frac{1}{5}$

3:

0.2	0.2	0.2	0.2	0.2

$\frac{2}{5} = \square$

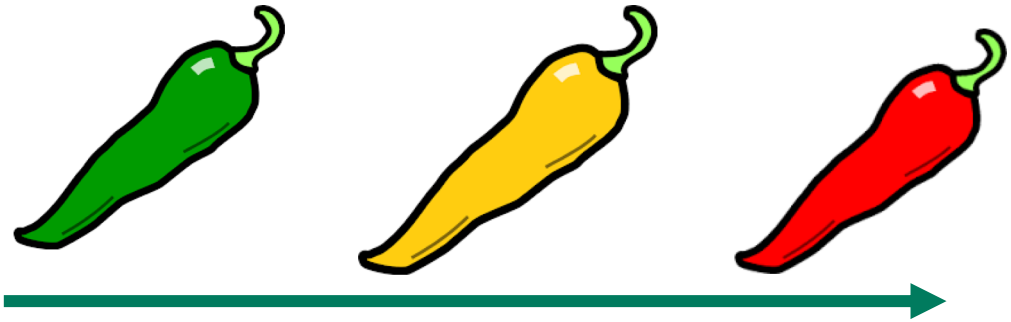
$\frac{3}{5} = \square$

$\frac{4}{5} = \square$

$\frac{6}{5} = \square$

The independent work continues on the next two slides. There are 5 questions and 1 extension.

(En Espanol – hay cinco preguntas y una extensión.)



Decimals as fractions

1 Complete the sentences.

a)

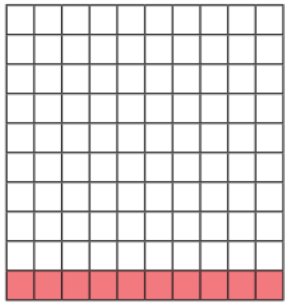
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

The whole has been divided into ☐ equal parts.

Each part is worth ☐

This is equivalent to ☐

b)



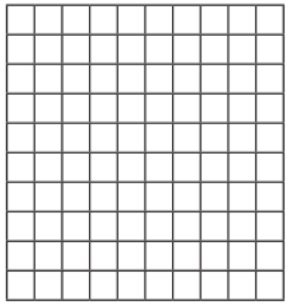
The whole has been divided into ☐ equal parts.

Each part is worth ☐

☐ parts out of ☐ are shaded.

This is equivalent to ☐

2 **a)** Shade 0.17 of the hundred square.



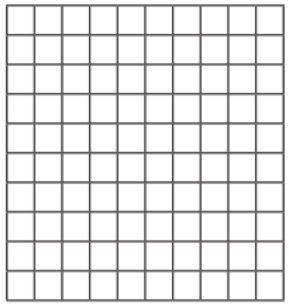
Complete the sentence.

☐ parts out of ☐ are shaded.

Write 0.17 as a fraction.

0.17 = ☐

b) Shade 0.2 of the hundred square.



Complete the sentence.

☐ parts out of ☐ are shaded.

Write 0.2 as a fraction in its simplest form.

0.2 = ☐

3

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

0.2	0.2	0.2	0.2	0.2

Use the bar models to fill in the missing numbers.

$0.2 = \frac{\square}{10} = \frac{1}{\square}$

$0.4 = \frac{\square}{10} = \frac{2}{\square}$

$\square = \frac{\square}{10} = \frac{4}{5}$

4 Fill in the missing numbers.

a) $0.54 = \frac{\square}{100} = \frac{\square}{50}$

b) $0.6 = \frac{\square}{10} = \frac{\square}{5}$

c) $0.3 = \frac{\square}{10} = \frac{\square}{100}$

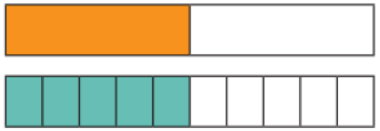
d) $\square = \frac{9}{100}$

e) $\square = \frac{9}{10}$

f) $\frac{21}{50} = \frac{\square}{100} = \square$

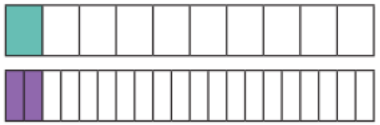
5 Use the bar models to fill in the missing numbers.

a)



$\frac{1}{2} = \frac{\square}{10} = \square$

b)



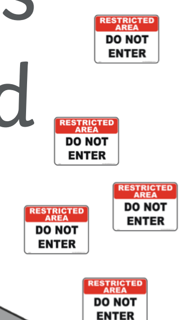
$\square = \frac{\square}{10} = \frac{\square}{20}$

Ext:

$0.3 = \frac{3}{10}$ so $0.37 = \frac{37}{10}$

Draw a diagram to show that Ron is wrong.

The next two slides contain the answers should you wish to check you work and reflect on what you understand.



Decimals as fractions

1 Complete the sentences.

a)

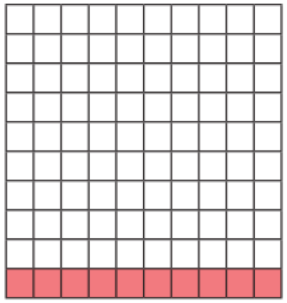
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

The whole has been divided into [10] equal parts.

Each part is worth [0·1]

This is equivalent to [$\frac{1}{10}$]

b)



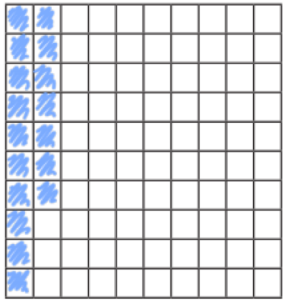
The whole has been divided into [100] equal parts.

Each part is worth [0·01]

[10] parts out of [100] are shaded.

This is equivalent to [$\frac{10}{100}$] or [$\frac{1}{10}$]

2 **a)** Shade 0.17 of the hundred square.



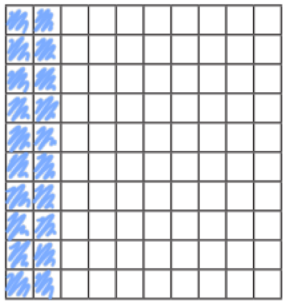
Complete the sentence.

[17] parts out of [100] are shaded.

Write 0.17 as a fraction.

0.17 = [$\frac{17}{100}$]

b) Shade 0.2 of the hundred square.



Complete the sentence.

[20] parts out of [100] are shaded.

Write 0.2 as a fraction in its simplest form.

0.2 = [$\frac{1}{5}$]

3

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

0.2	0.2	0.2	0.2	0.2

Use the bar models to fill in the missing numbers.

$0.2 = \frac{\boxed{2}}{10} = \frac{1}{\boxed{5}}$

$0.4 = \frac{\boxed{4}}{10} = \frac{2}{\boxed{5}}$

$\boxed{0.8} = \frac{\boxed{8}}{10} = \frac{4}{5}$

4 Fill in the missing numbers.

a) $0.54 = \frac{\boxed{54}}{100} = \frac{\boxed{27}}{50}$

b) $0.6 = \frac{\boxed{6}}{10} = \frac{\boxed{3}}{5}$

c) $0.3 = \frac{\boxed{3}}{10} = \frac{\boxed{30}}{100}$

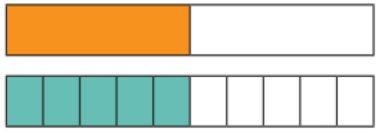
d) $\boxed{0.09} = \frac{9}{100}$

e) $\boxed{0.9} = \frac{9}{10}$

f) $\frac{21}{50} = \frac{\boxed{42}}{100} = \boxed{0.42}$

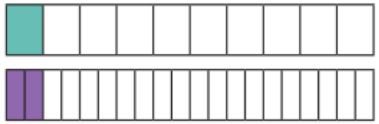
5 Use the bar models to fill in the missing numbers.

a)



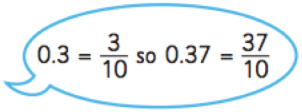
$\frac{1}{2} = \frac{\boxed{5}}{10} = \boxed{0.5}$

b)



$\boxed{0.1} = \frac{\boxed{1}}{10} = \frac{\boxed{2}}{20}$

Ext:



Draw a diagram to show that Ron is wrong.