On a whiteboard...

Can you solve the following problems?

Write the next three numbers in this sequence: 3, 6, 9...   *12, 15, 18*
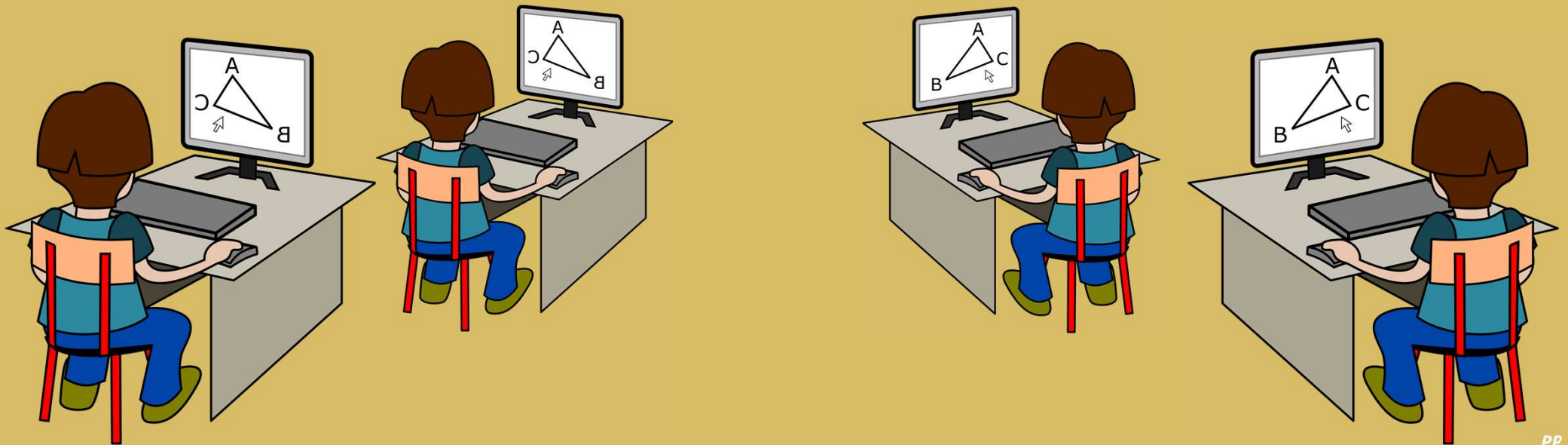
Write the next three numbers in this sequence: 5, 10, 15...   *20, 25, 30*

Write the next three numbers in this sequence : 25, 50, 75...   *100, 125, 150*

Can you write your own sequence of numbers and test them on your friend?

PP

Today

We are going to be **counting** up and down in **tenths** and **hundredths**.

We'll also look at some pictures that explain what a tenth and hundredth actually look like.

Next we'll explore how **tenths** appear when we **divide by ten** and how **hundredths** appear when we **divide by 100**.

Finally, we'll start to count in tenths and hundredths.

PP

LO: To count in tenths and hundredths

Firstly, we'll think about what tenths or hundreds actually look like on a **place value** chart.

Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
			.			

Notice how how the **tenths** and **hundredths** are further to the right of the ones column.

This means a **tenth is smaller than a one** and a **hundredth is smaller than a tenth**.

But how much smaller? And what does it look like?

PP

LO: To count in tenths and hundredths

Let's think about what a '**one**' actually is.

It means **one of something**. In this case, it is **one rectangle**.

1/10 or 0.1
2/10 or 0.2
3/10 or 0.3
4/10 or 0.4
5/10 or 0.5
6/10 or 0.6
7/10 or 0.7
8/10 or 0.8
9/10 or 0.9
10/10 or 1.0

When we divide one by ten, we simply break it apart into ten smaller pieces. These smaller pieces are called **tenths**.

We can write the write tenths like this:

1/10 or **0.1**

Either way is correct.

PP

LO: To count in tenths and hundredths

When we think about what tenths are, we can show it in a variety of ways: as a diagram, a fraction and a decimal.

They all mean the same thing.

$$= 3/10 = 0.3$$

LO: To count in tenths and hundredths

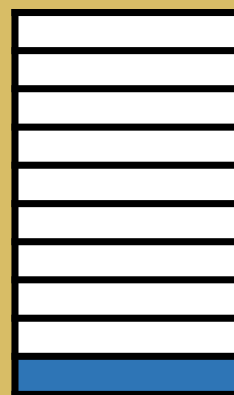On a whiteboard, write down the fraction and decimal for these images…

= 6/10 = 0.6

= 9/10 = 0.9

= 4/10 = 0.4

= 1/10 = 0.1
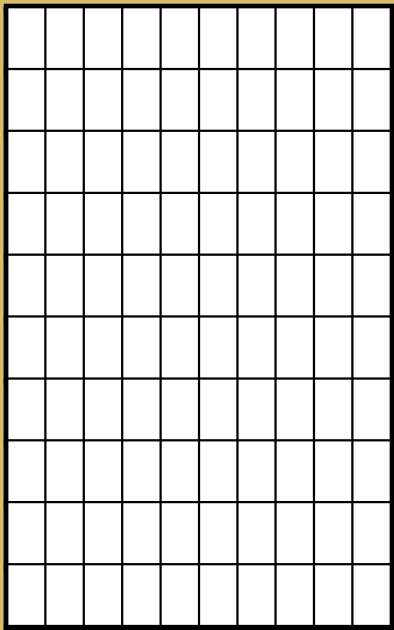
PP

LO: To count in tenths and hundredths

Today, we're going to also think about **hundredths**. These are **100** times smaller than **one**. We can use a diagram to show this:

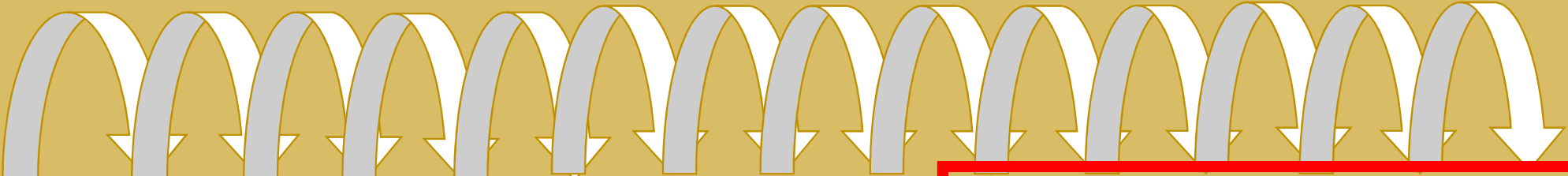We take our one rectangle, split it into one hundred smaller parts.

We can write the write hundredths like this:

1/100 or **0.01**

Either way is correct.

LO: To count in tenths and hundredths

Now that we know what tenths and hundredths actually are, we can start to count in them. Be careful, there are some common errors that people always make when doing this!

0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5
1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	13/10	14/10	15/10

Look at the fraction underneath the decimal, notice how the numerator is *larger* than the denominator – this is because we are using a decimal number larger than 1.

PP

LO: To count in tenths and hundredths

Next, we are going to count in **hundredths**.

In this example, we are starting from **0.01** or **1/100**
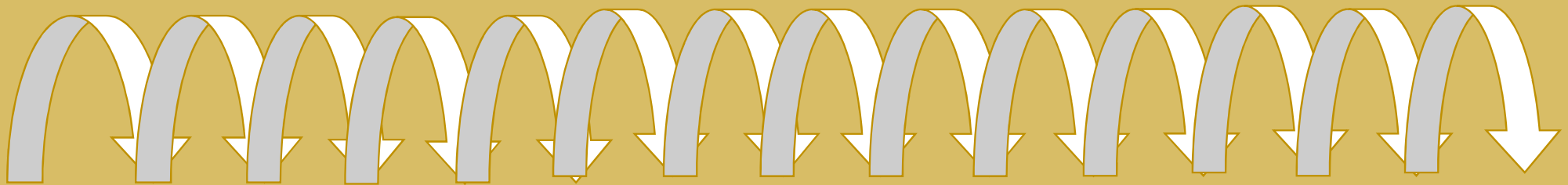
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15
1/100	2/100	3/100	4/100	5/100	6/100	7/100	8/100	9/100	10/100	11/100	12/100	13/100	14/100	15/100

Notice how at 10/100 the decimal is the same as 1/10 – that is because 10/100 = 1/10 – they are the same!

LO: To count in tenths and hundredths

On a whiteboard can you…

Start at 0.2 and count in 1/10ths until you arrive at 1.3

0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3

Start at 0.35 and count in 1/100ths until you arrive at 0.41

0.35	0.36	0.37	0.38	0.39	0.40	0.41

Start at 1.01 and count back in 1/100ths until you arrive at 0.94

1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.94

PP

LO: To count in tenths and hundredths

So what can we take away with us to help us solve the problems we are going to face today?

Take your time when setting out your work, remember the need to leave enough space to count up and down in **tenths** and **hundredths**.

Think carefully about the size of your **numerator** and **denominator**.

PP

LO: To count in tenths and hundredths

Some of us will even solve word problems that involves counting in tenths and hundredths

Some of us will count in hundredths increasing and decreasing

Most of us will count in tenths increasing and decreasing

All of us will understand what tenths and hundredths are and how they can be represented using physical items

| 40 | 30 | 20 | 10 |

PP

On a whiteboard...

Can you count on in **tenths until 1.7**?

0.3

3/10

Now **hundredths until 0.75**?

0.61

61/100

PP