## 27.4.20 LO to identify the value of each digit in numbers to three decimal places and order and compare them.



Identify the value of each digit in numbers to three decimal places

## What is the value of the underlined digit?



Identify the value of each digit in numbers to three decimal places

## Which digit is in the hundredths place?



Identify the value of each digit in numbers to three decimal places

## What is the place value position of the zero?



## Order and compare numbers with up to three decimal places

To order decimal numbers, we compare the place value of the digits in each number, starting with the digits in the largest place value position.

If numbers have the same digit in a place value position, we look at the digits in the place value position to the right until we find a difference.

When comparing numbers, we can use symbols to show which is the smaller or larger number.

> 0.873 > 0.853 0.205 < 0.215



Order and compare numbers with up to three decimal places

Choose the correct symbol to compare these decimal numbers.



Order and compare numbers with up to three decimal places

Choose the correct symbol to compare these decimal numbers.



Order and compare numbers with up to three decimal places

Choose the correct symbol to compare these decimal numbers.



Order and compare numbers with up to three decimal places

Which of these decimal numbers is the smallest?



Order and compare numbers with up to three decimal places

Which of these decimal numbers is the largest?



Independent work.

See how many of the **27.4.20 decimal place value riddle cards** you can solve. The answers are there to check at the end.

E4E Try writing one for someone in your family to solve – or write one for Mrs M or Miss C and get someone to email it.

## 28.4.20

## LO to multiply decimal numbers and divide numbers where the answer is to decimal places.

## Multiply one-digit numbers with up to two decimal places by whole numbers

#### **Short Multiplication**

We use short multiplication when we are multiplying a decimal number by a **one-digit** number.

Position the decimal number above the one-digit number. Make sure that the place value columns are correct.

Starting at the right-hand side, multiply each digit in the decimal number by the one-digit number.

We can only write a single digit in each column, so if the product is a two-digit number, we have to regroup the number and place into the next column. We do this by writing the number above the digits in the next place holder.



When we regroup, we must remember to add this number to the multiplication answer of the next digit. Make sure you give your answer as a decimal.

## Multiply one-digit numbers with up to two decimal places by whole numbers

#### Long Multiplication

We can use long multiplication when we are multiplying a decimal number by a **two-digit number** or **larger**.

Position the decimal number above the two-digit number. Make sure that the place value columns are correct.

Starting at the right-hand side, multiply each digit in the decimal number by the ones digit, regrouping and placing into the next column if necessary. Strike the regrouped numbers once you have your first answer so that you don't confuse any new regroupings.

Place a zero in the furthest right-hand column on the next row down to show we are now going to multiply by a power of ten.



Starting at the right-hand side multiply each digit in the decimal number by the tens digit, regrouping and placing into the next column if necessary.

Finally, add the digits in each column using column addition to find the answer.

Multiply one-digit numbers with up to two decimal places by whole numbers

What is the answer to this decimal multiplication?



Multiply one-digit numbers with up to two decimal places by whole numbers

What is the answer to this decimal multiplication?



Multiply one-digit numbers with up to two decimal places by whole numbers

Which sign makes the statement true?



Multiply one-digit numbers with up to two decimal places by whole numbers

Which sign makes the statement true?



Multiply one-digit numbers with up to two decimal places by whole numbers

Which sign makes the statement true?



## Use written division methods in cases where the answer has up to two decimal places

### **Short Division**

We can use short division when we are dividing a decimal number by a **one-digit** number.

Start by dividing the first digit of the dividend (the number that is being divided: 53) by the divisor (the number which is being divided into: 4).



Write the answer above the horizontal line and regroup any remainder to the next digit.

Remember to keep the decimal place in the same place value position.

## Use written division methods in cases where the answer has up to two decimal places

### **Long Division**

We can use long division when we are dividing a decimal number by a **two-digit** number or **larger**.

Start by dividing the first two digits of the dividend by the divisor. Write the answer above the dividend and the multiple of the divisor below.

Use column subtraction to calculate the remainder and draw down the next digit of the dividend.



Repeat this process until the end of the calculation.

Remember to keep the decimal place in the same place value position. Sometimes the answer to a decimal division may continue into many decimal places.



Use written division methods in cases where the answer has up to two decimal places

## What is the answer to this division calculation?





Use written division methods in cases where the answer has up to two decimal places

What is the answer to this division?



## Independent work

There are two worksheets for today.

Both of them give you problems in context for multiplication and division.

Decide how long you will work for, maybe 20 or 30 minutes and work on each for half of that time.

The multiplication sheet has mild – 1\* Spicy – 2\*\* and Extra spicy 3\*\*\*

The division asks you to answer in remainders, but we want you to answer to **2 decimal places.** 

## 29.4.20

# LO to round decimal numbers to specified degrees of accuracy.

## Round decimal numbers to specified degrees of accuracy

Rounding makes it easier to talk about and use decimal numbers.

We usually round decimal numbers to the nearest whole number or to one or two decimal places depending on the context.

54.6cm	rounded to the nearest whole number is	55cm
2.43m	rounded to one decimal place is	2.4m
5.328km	rounded to one decimal place is	5.3km
£2.47	rounded to one decimal place is	£2.50
4.135kg	rounded to two decimal places is	4.14kg

To identify whether the decimal will round up or down, look at the digit **immediately to the right** of the place value position you are rounding to.



If the digit immediately to the right of the place value position you are rounding to is **1, 2, 3 or 4,** we round the number **down**.

If the digit immediately to the right of the place value position you are rounding to is **5, 6, 7, 8 or 9,** we round the number **up**.

## Round decimal numbers to specified degrees of accuracy

What is 23.625kg rounded to the nearest hundredth?



## Round decimal numbers to specified degrees of accuracy

## What is 34.8m rounded to the nearest whole metre?





Round decimal numbers to specified degrees of accuracy

Which digit makes this statement true?

# 853.187<u>?</u> rounded to the nearest thousandth is 853.188





## Independent work

Complete the sheet 29.4.20 rounding decimals.

All Complete numbers 1 – 12

E4E questions 13 and 14

## 30.4.20

# LO to recall and use equivalences between simple fractions, decimals and percentages

## Recall and use equivalences between simple fractions, decimals and percentages

Fractions, decimals and percentages are all different ways of expressing a proportion.

A percentage is a proportion out of one hundred. The sign % stands for 'per cent' which means 'out of 100'.

Here are some fraction, percentage and decimal equivalents that we can learn as facts:

Fraction	Percentage	Decimal
$\frac{1}{2}$	50%	0.5
$\frac{1}{4}$	25%	0.25
<u>3</u> 4	75%	0.75
$\frac{1}{5}$	20%	0.2
1 10	10%	0.1

## Recall and use equivalences between simple fractions, decimals and percentages

For trickier equivalents, we can use the rules in this diagram to help us:







Recall and use equivalences between simple fractions, decimals and percentages

## Convert this fraction into a percentage.





Recall and use equivalences between simple fractions, decimals and percentages

Convert this percentage into a decimal rounded to the nearest hundredth.



## Independent work.

Comparing Fractions, Decimals and Percentages

1.Which one is smaller?a) 40% or  $\frac{1}{4}$ ?b) 0.4 or 5/8?c) 0.5 or 5%?

2.Write the following amounts in descending (largest to smallest) order: 12%, 3/8, 0.0123, 42%, 1/5, 0.45

3.Write the following amounts in ascending (smallest to largest) order: (where necessary, round to 2 decimal places): 30%, 1/3, 0.35, 3/7, 45%, 0.04

E4E on the next slide

E4E
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Fractions	Decimals	Percentages
	0.8	
		24%
7 8		
		45%
	0.14	
		5%
<u>2</u> 5		
	0.02	
		60%
<u>3</u> 4		
	0.94	

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## <u>1.5.20</u>

The work we have sent for today is to be found on 3 different sets of sheet.

There is practice work and word problems.

Take a look at all three and decide which you would like to complete.