

This week's Learning:

Adding and Subtracting Decimals

First, we will practise to add and subtract decimals using the column method.

Next, you will create a set of instructions and questions for somebody who hasn't worked with decimals before.

Ready or not we'll start!

<https://www.youtube.com/watch?v=n-OcbG1FIBQ>



The **RUCSAC** Method
for solving maths
word problems

I bought a new book costing £3.22
and a new pen which cost £5.71.

How much did I spend in total?

I want to add £3.22 and £5.71

R	Read the question carefully	Find the important information - <u>underline</u> it!
U	Understand the question	What do you have to find out? Draw a 'picture' of the question, if it helps.
C	Choose the correct method of calculation	+ - × ÷ What method is best for you to use?
S	Solve the problem	Show every step and keep your working out neat.
A	Answer the question	Read the question again - have you answered it? Make the answer clear.
C	Check your answer	Does it make sense? Find a way to check - estimate or use the inverse.

$$\begin{array}{r} \text{£}3 \text{ . } 22 \\ + \quad \text{£}5 \text{ . } 71 \\ \hline \text{£}3 \text{ . } 791 \end{array}$$

Am I correct?

The **golden** rule:

The decimal points MUST be aligned before adding the numbers.

$$\begin{array}{r} \text{£}3.22 \\ + \text{£}5.71 \\ \hline \text{£}8.93 \end{array}$$

Your turn😊

1😊

£2.52

+ £4.34

£ .

£5.26

+ £4.49

£ .

Regrouping

$$\begin{array}{r} \text{£}4.18 \\ + \text{£}3.75 \\ \hline \text{£}7.93 \\ \quad \quad 1 \end{array}$$

$$\begin{array}{r} \text{£}2.89 \\ + \text{£}1.58 \\ \hline \text{£} \quad . \end{array}$$

This technique doesn't just work for money. It works for any decimal addition as long as you align the decimal points.

Sometimes it helps to introduce a place holder zero, so that each number has the same number of DECIMAL PLACES.

3.57

2.70

+ 5.49

9.06

1

1

+ 5.46

8.16

1

This place holder zero
can only ever be put on
the very beginning or
the very end.

$$\begin{array}{r} 5.59 \\ + 3.50 \\ \hline 9.09 \end{array}$$

The ¹golden rule:

The decimal points **MUST** be aligned before adding the numbers.

Where necessary, add the place holder zeros to help.

Main Activity

Work out the following in your book:

$$\begin{array}{r} \text{(a)} \quad \overset{4}{\cancel{5}} \overset{15}{\cancel{6}} \overset{1}{3} \\ - 285 \\ \hline 278 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad 704 \\ - 439 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 13.7 - 4.56 \\ \quad \quad 13.70 \\ - \quad 04.56 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(d)} \quad 9 - 2.475 \\ \quad \quad 9.000 \\ - \quad 2.475 \\ \hline \end{array}$$

Challenge:

Write down a set of instructions for someone who wasn't in the lesson so they will be able to add and subtract decimals. Then write 8 questions for them to practise, 2 easy, 2 slightly harder, 2 hard and two really hard.

More activities to practise are added separately.

Have fun!