

22.4.21

Decimals

Learning Objective:

We are learning to add and subtract decimals with the same number of decimal places.

I will be successful if:

- I can exchange numbers to help with subtraction.
- I can add and subtract decimals using visual representations and written column method.
- I can use estimation to check my answer.

Key Vocabulary

place value

decimal places

exchanging

whole number

ones

tenths

hundredths

thousandths

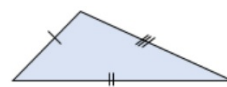
value

digit

Flashback 4

Year 5 | Week 2 | Day 4

1) Add 3.27 to 4.82



2) What is 0.16 more than 0.59?

3) What are the missing numbers?

$$\frac{7}{10} = \frac{\square}{100} = \frac{700}{\square}$$

4) Which angles are acute angles?

87° 27° 90° 1°



Challenge

Fill in the missing symbols (<, > or =).

$\frac{1}{10} \square 0.75$

$0.4 \square \frac{1}{4}$

$0.5 \square \frac{1}{5}$

$\frac{3}{4} \square 0.75$

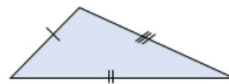
$0.8 \square \frac{4}{5}$

$\frac{1}{2} \square 0.2$

Flashback 4

Year 5 | Week 2 | Day 4

1) Add 3.27 to 4.82 **8.09**



2) What is 0.16 more than 0.59? **0.75**

3) What are the missing numbers?

$$\frac{7}{10} = \frac{\square}{100} = \frac{700}{\square} \quad \mathbf{70, 1000}$$

4) Which angles are acute angles? **87°, 27° and 1°**

87° 27° 90° 1°



Challenge

Fill in the missing symbols (<, > or =).

$$\frac{1}{10} < 0.75$$

$$0.4 > \frac{1}{4}$$

$$0.5 > \frac{1}{5}$$

$$\frac{3}{4} = 0.75$$

$$0.8 = \frac{4}{5}$$

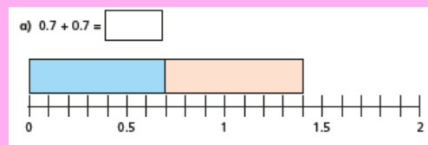
$$\frac{1}{2} > 0.2$$

Which methods have you learn to help you add decimals with the same number of decimal places?

Column method

		0	7	5	1
+		0	3	2	
		.			

Number line

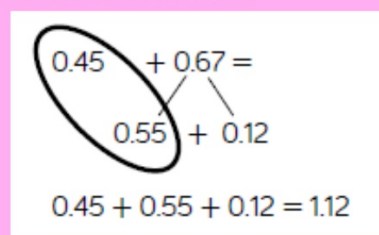


Place value grid

$0.86 + 0.68 =$

	Ones	Tenths	Hundredths
		8	6
+		6	8

Flexible partitioning to help with mental addition



Use one of the methods from the previous slide to help you solve these calculations.

1. $4.52 + 9.85 =$

2. $7.89 + 4.45 =$

3. $5.07 + 8.3 =$

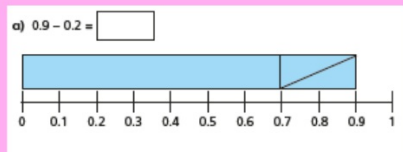
4. $9.27 + 0.08 =$

Which methods have you learn to help you subtract decimals with the same number of decimal places?

Column method

		8	0	9
	-	3	8	1

Number line



Place value grid

Ones	Tenths	Hundredths
1 1	6 5	4 4 4 4
	4 5	4 4 4 4
		4 4 4 4

Mental subtraction

$$8.64 - 2.49 = 6.15$$

Use one of the methods from the previous slide to help you solve these calculations.

1. $14.52 - 9.85 =$

2. $9.81 - 2.49 =$

3. $5.12 - 3.07 =$

4. $6.27 - 2.06 =$

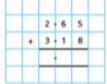
Problem solving

Adding and subtracting decimals with the same number of decimal places (problem solving)



1 Work out the calculations.

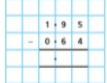
a) $2.65 + 3.18$



c) $13.5 + 27.2$



b) $1.95 - 0.64$



d) $40.8 - 23.6$



2 Work out the missing digits.

a) $4 \cdot \square + \square = 7 = 5 \cdot \square - 9$

b) $\square \cdot 4 + 7 \cdot \square = 9 = 5$

c) $4 \cdot \square + \square = 7 = 9 = 5$

d) $7 \cdot 4 = 9 \cdot 5 = \square$

e) $7 \cdot 4 = 9 \cdot \square = 5$

- 3 A rope measures 3.65 m. The rope is cut into two pieces. The first piece is 1.38 m long.



- a) How long is the second piece?

m

- b) How much longer is the second piece of rope than the first piece?

4 Here are the prices of some items in a supermarket.



- a) Amir walks around 1

- a) How far does Amir walk?

- a) Jack buys all of these items. Show that he gets £2.28 change if he pays with a £10 note.

- b) Does it matter w/ Will he still walk

- b) Rosie buys three of these items. Two of the items are the same. She pays £4.75. What has Rosie bought?

Compare methods with a partner.

6 Here are some digit cards.



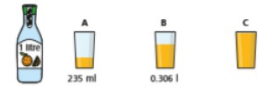
Use the digits to complete the calculation.

+ = 68.1

- 7 The mass of a watermelon is 3.2 kg. The mass of a pineapple is 1.3 kg lighter than the watermelon. What is the total mass of the pineapple and watermelon?

kg

- 8 A full bottle of juice is poured into three glasses: A, B and C.



How much juice is poured into glass C?

l

- 9 The table shows the amount of rainfall on Monday to Friday in a town.

Day	Mon	Tue	Wed	Thu	Fri
Rainfall (cm)	1.7	2.5	3.0	4.4	

The total rainfall for Monday to Wednesday was equal to the total rainfall on Thursday and Friday. Complete the table.

Challenge

Create your own reasoning problem.

You may create a true or false problem, or a question where you have to prove if they are right or wrong, or you may choose to create a problem similar to one from your work today.