

### Year 5

#### Summer Term Week 9 (w/c 22<sup>nd</sup> June)

##### Lesson 1

Subtracting decimals with the same number of decimal places

<https://vimeo.com/430338565>

##### Lesson 2

Subtracting decimals with a different number of decimal places

<https://vimeo.com/430338659>

##### Lesson 3

Multiply decimals by 10 100 and 1000

<https://vimeo.com/430338787>

##### Lesson 4

Divide decimals by 10 100 and 1000

<https://vimeo.com/430338904>

# Subtracting decimals with the same number of decimal places

1 Use a place value chart and counters to help you complete the subtractions.

Tens	Ones	Tenths	Hundredths
10	1 1 1 1	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	0.01 0.01 0.01

a)  $14.83 - 12.12 = \square$       c)  $14.83 - 12.92 = \square$

b)  $14.83 - 12.14 = \square$       d)  $14.83 - 12.94 = \square$

e) Which calculation was easier? Talk about it with a partner.

f) What happens when you don't have enough counters in a column to take away?

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2 Complete the sentences.

1 ten can be exchanged for  ones.

1 one can be exchanged for  tenths.

1 tenth can be exchanged for 10 \_\_\_\_\_.



3 Annie is calculating  $2.42 - 1.17$  using the column method.

She uses a place value chart to help her.

Ones	Tenths	Hundredths
1 1	0.1 0.1 0.1 0.1	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01

2	<del>4</del>	2	
-	1	1	7
<hr/>			
1	2	5	

How does the place value chart support the column method?

Talk about it with a partner.

4 Complete the column subtractions.

a)

	5	6	4
-	3	1	2
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<hr/>			

c)

	8	0	9
-	3	8	1
<hr/>			
<hr/>			

b)

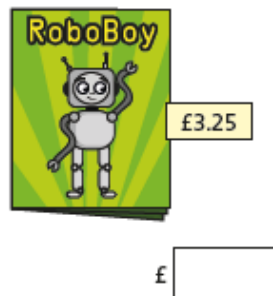
	5	6	4
-	3	1	5
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<hr/>			

d)

	1	2	0
-	1	1	3
<hr/>			
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- 5 Whitney has £8.52  
She buys this comic.  
How much money does she have left?



- 6 Here are some items for sale in a shop.



- a) How much more does a scarf cost than a bag of marbles?

£

- b) Esther has £15.31  
She buys a pair of headphones and a bag of marbles.  
How much money does she have left?

£

- c) Tom has £7.01  
He buys one item and has £5.92 left.  
What did he buy?

Tom bought \_\_\_\_\_

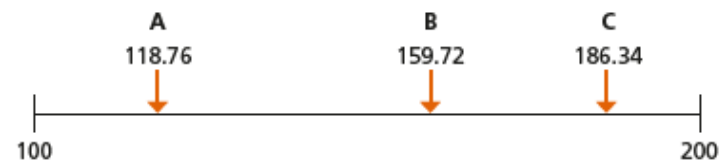
- 7 Ron and Dora are doing a sponsored walk.  
Ron walks 3.12 miles.  
Dora walks 5.49 miles.  
How much further does Dora walk than Ron?  
Dora walks  miles further than Ron.

- 8 Tommy has three pieces of string.
- The first piece is 0.78 m long.
  - The second piece is 0.24 m shorter than the first piece.
  - The third piece is 0.07 m shorter than the second piece.

What is the total length of all three pieces of string?  
Give your answer in metres and centimetres.

m and  cm

- 9 A, B and C are points on a number line.



How much greater is the difference between A and C than the difference between B and C?

Compare methods with a partner.



# Subtracting decimals with a different number of decimal places

1 Use the place value chart to help you work out the subtractions.

Ones	Tenths	Hundredths
● ● ● ●	● ● ● ●	● ● ● ●
● ●		

a)

		5	3	6
		-	1	2
			.	

c)

		5	3	6
		-	3	8
			.	

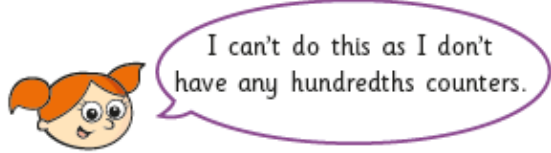
b)

		5	3	6
		-	3	5
			.	

d)

		5	3	6
		-	4	7
			.	

2 Alex is using counters to help her work out  $4.7 - 1.35$



Do you agree with Alex? \_\_\_\_\_  
Talk about it with a partner.

3 Complete the subtractions.

a)

		2	3	6
		-	1	4
			.	

c)

		7	3	
		-	1	1 5
			.	

b)

		6	1	5
		-	3	8
			.	

d)

		2	4	4
		-	3	1 2
			.	

4 Use the column method to work out the subtractions.

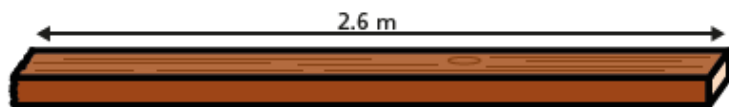
a)  $13.59 - 1.82$


c)  $5.6 - 1.39$


b)  $73.84 - 9.2$


d)  $18.2 - 3.64$


- 5 A plank of wood measures 2.6 m.  
A carpenter cuts a piece of wood from the plank that is 0.52 m long.



- a) What is the length of the remaining plank?

 m

- b) The carpenter cuts a second piece of wood from the plank.  
She now has 0.3 m of the plank remaining.

What is the length of the second piece of wood that she cut?

 m

- 6 The mass of a bag of marbles is 54.3 g.  
These two marbles are removed from the bag.



What is the mass of the bag of marbles now?

 g

- 7 Work out the missing digits.  
 $\underline{\quad}3.4 - 2.5\underline{\quad} = 10.81$

- 8 Use the column method to work out the subtractions.

a)  $14 - 2.7$


d)  $26 - 3.91$


b)  $8 - 3.65$


e)  $25 - 3.842$


c)  $20 - 2.85$


f)  $90 - 0.821$


# Multiplying decimals by 10, 100 and 1,000

1 Complete the multiplications.

a) 

H	T	O	Tths	Hths
		3	7	

 $3.7 \times 10 =$

b) 

H	T	O	Tths	Hths
	1	4	5	

 $14.5 \times 10 =$

c) 

H	T	O	Tths	Hths
		1	5	8

 $1.58 \times 10 =$

d) 

H	T	O	Tths	Hths
	1	3	0	6

 $13.06 \times 10 =$

What do you notice when you multiply a number by 10?

2 Complete the multiplications.

a)  $1.7 \times 10 =$        d)  $13.4 \times 10 =$

b)  $1.75 \times 10 =$        e)  $10 \times 13.04 =$

c)  $1.73 \times 10 =$        f)  $130.4 \times 10 =$

3 Complete the multiplications.

a) 

H	T	O	Tths	Hths
		4	1	

 $4.1 \times 100 =$

b) 

H	T	O	Tths	Hths
		4	1	5

 $4.15 \times 100 =$

c) 

H	T	O	Tths	Hths
	1	4	5	

 $14.5 \times 100 =$

d) 

H	T	O	Tths	Hths
		4	0	5

 $4.05 \times 100 =$

What do you notice when you multiply a number by 100?

4 Complete the calculations.

a)  $7.2 \times 100 =$        d)  $1.89 \times 100 =$

b)  $3.4 \times 100 =$        e)  $73.57 \times 100 =$

c)  $19.5 \times 100 =$        f)  $1.317 \times 100 =$

- 5 Amir has multiplied 3.8 by 1,000



The answer is 3.8000

- a) What mistake has Amir made?

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- b) Work out the correct answer.

$3.8 \times 1,000 = \boxed{\phantom{0000}}$

- 6 Complete the multiplications.

a)  $4.7 \times 10 = \boxed{\phantom{00}}$       c)  $5.84 \times 10 = \boxed{\phantom{000}}$

$4.7 \times 100 = \boxed{\phantom{000}}$        $5.84 \times 100 = \boxed{\phantom{0000}}$

$4.7 \times 1,000 = \boxed{\phantom{0000}}$        $5.84 \times 1,000 = \boxed{\phantom{00000}}$

b)  $19.3 \times 10 = \boxed{\phantom{000}}$       d)  $18.06 \times 10 = \boxed{\phantom{0000}}$

$19.3 \times 100 = \boxed{\phantom{0000}}$        $100 \times 18.06 = \boxed{\phantom{00000}}$

$1,000 \times 19.3 = \boxed{\phantom{00000}}$        $18.06 \times 1,000 = \boxed{\phantom{000000}}$

How did you work out the answers? Talk to a partner.



- 7 Complete the calculations.

a)  $7.7 \times \boxed{\phantom{00}} = 770$

e)  $8.032 \times \boxed{\phantom{000}} = 80.32$

b)  $\boxed{\phantom{000}} \times 10 = 1,950$

f)  $\boxed{\phantom{0000}} \times 18.3 = 1,830$

c)  $11.5 \times \boxed{\phantom{000}} = 115$

g)  $195.32 \times \boxed{\phantom{0000}} = 1,953.2$

d)  $\boxed{\phantom{0000}} \times 11.5 = 11,500$

h)  $\boxed{\phantom{00000}} \times 1,000 = 7,200$

- 8 Tommy is 1.4 m tall.

A tree is 10 times as tall as Tommy.

A building is 100 times as tall as Tommy.

- a) How tall is the tree?

 m

- b) How much taller is the building than the tree?

 m

- 9 Match the multiplications to the descriptions.

$\times 10 \times 10$

multiply by 10

$\times 10 \times 10 \times 10$

$\times 100 \times 10$

multiply by 100

$\times 10 \times 100$

$\times 10 \times 1$

multiply by 1,000



# Dividing decimals by 10, 100 and 1,000

1 Complete the divisions.

a) 

H	T	O	Tths	Hths
		5	.	

 $5 \div 10 = \square$

b) 

H	T	O	Tths	Hths
	1	5	.	

 $15 \div 10 = \square$

c) 

H	T	O	Tths	Hths
		3	.	8

 $3.8 \div 10 = \square$

d) 

H	T	O	Tths	Hths
	1	3	.	8

 $13.8 \div 10 = \square$

What do you notice when you divide a number by 10?

2 Complete the calculations.

a)  $7 \div 10 = \square$       d)  $16 \div 10 = \square$

b)  $7.8 \div 10 = \square$       e)  $16.4 \div 10 = \square$

c)  $7.86 \div 10 = \square$       f)  $16.48 \div 10 = \square$

3 Complete the divisions.

a) 

H	T	O	Tths	Hths	Thths
	1	7	.		

 $17 \div 100 = \square$

b) 

H	T	O	Tths	Hths	Thths
		9	.	4	

 $9.4 \div 100 = \square$

c) 

H	T	O	Tths	Hths	Thths
2	7	6	.		

 $276 \div 100 = \square$

d) 

H	T	O	Tths	Hths	Thths
	3	2	.	5	

 $32.5 \div 100 = \square$

What do you notice when you divide a number by 100?

4 Complete the divisions.

a)  $7 \div 100 = \square$       b)  $109 \div 100 = \square$

$7.2 \div 100 = \square$        $10.9 \div 100 = \square$

$7.25 \div 100 = \square$        $10.95 \div 100 = \square$



- 5 Use a place value chart to work out  $136 \div 1,000$

H	T	O	Tths	Hths	Thths
1	3	6			

Complete the calculation.

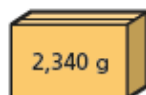
$$136 \div 1,000 = \square$$

Talk to a partner about your method.

- 6 Use your knowledge of measure to work out the answers.

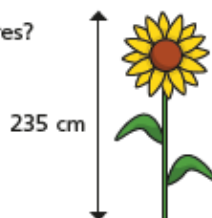
- a) What is the mass of the box in kilograms?

$$\square + \square = \square$$



- b) What is the height of the sunflower in metres?

$$\square + \square = \square$$



- c) What is the amount of juice in litres?

$$\square + \square = \square$$



- 7 Complete the calculations.

a)  $147 \div 10 = \square$

c)  $3,200 \div 10 = \square$

$$147 \div 100 = \square$$

$$3,200 \div 100 = \square$$

$$147 \div 1,000 = \square$$

$$3,200 \div 1,000 = \square$$

b)  $21 \div 10 = \square$

d)  $5,006 \div 10 = \square$

$$21 \div 100 = \square$$

$$5,006 \div 100 = \square$$

$$21 \div 1,000 = \square$$

$$5,006 \div 1,000 = \square$$

- 8 Complete the divisions.

a)  $83 \div \square = 0.83$

e)  $1,799 \div \square = 17.99$

b)  $\square \div 10 = 0.95$

f)  $\square \div 100 = 11.8$

c)  $\square \div 10 = 3.9$

g)  $178 \div \square = 17.8$

d)  $68 \div \square = 0.068$

h)  $3.18 \div \square = 0.318$