WALT: Subtract two 4-digit numbers with multiple exchanges

Watch this video https://vimeo.com/465337176

# Subtract Two 4-digit Numbers (3)

## Notes and Guidance

Children explore whathappens when a subtraction has more than oneexchange. They can continue to use manipulatives to support their understanding. Some children may feel confident calculating with a written method.
Encourage children to continue to explain their working to ensure they have a secure understanding of exchange within 4-digits numbers.

## Mathematical Talk

When do we need to exchange within a column subtraction?

What happens if there is a zero in the next column? How do we exchange?

Can you use place value counters or Base 10 to support your understanding?
How can you find the missing 4-digit number? Are you going to add or subtract?

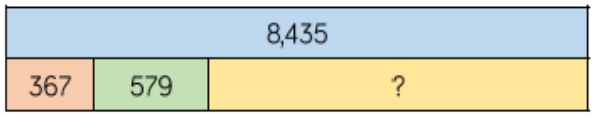
## Varied Fluency

Use place value counters and the column method to calculate:

| | | |
|---|---|---|
| 5,783 – 844 | 6,737 – 759 | 8,252 – 6,560 |
| 1,205 – 398 | 2,037 – 889 | 2,037 – 1,589 |

A shop has 8,435 magazines.
367 are sold in the morning and 579 are sold in the afternoon.

How many magazines are left?

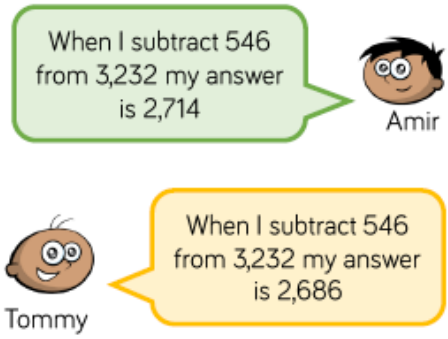



There are ___ magazines left.

Find the missing 4-digit number.

| | Th | H | T | O |
|---|---|---|---|---|
| | ? | ? | ? | ? |
| + | 4 | 6 | 7 | 8 |
| | 7 | 4 | 3 | 1 |

Amir and Tommy solve a problem.




Who is correct?
Explain your reasoning.
Why is one of the answers wrong?

There were 2,114 visitors to the museum on Saturday.
650 more people visited the museum on Saturday than on Sunday.


Altogether how many people visited the museum over the two days?

What do you need to do first to solve this problem?

WALT: Find equivalent lengths in m and cm

Watch this video https://vimeo.com/467395292

# Equivalent Lengths – m & cm

## Notes and Guidance

Children recognise that 100 cm is equivalent to 1 metre. They use this knowledge to convert other multiples of 100 cm into metres and vice versa.

When looking at lengths that are not multiples of 100, they partition the measurement and convert into metres and centimetres. At this stage, children do not use decimals. This is introduced in Year 4.

## Mathematical Talk

If there are 100 cm in 1 metre, how many centimetres are in 2 metres? How many centimetres are in 3 metres?

Do we need to partition 235 cm into hundreds, tens and ones to convert it to metres? Is it more efficient to partition it into two parts? What would the two parts be?

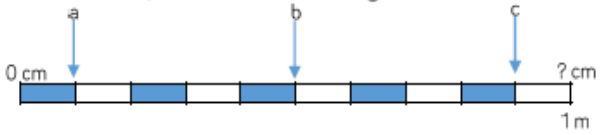
If 100 cm is equal to one whole metre, what fraction of a metre would 50 cm be equivalent to? Can you show me this in a bar model?



## Varied Fluency

R

If a = 10 cm, calculate the missing measurements.




b = ___ cm  c = ___ cm  1 metre = ___ cm

Can you match the equivalent measurements?

| | |
|---|---|
| 100 cm | 9 m |
| 5 m | 200 cm |
| 300 cm | 500 cm |
| 2 m | 1 metre |
| 900 centimetres | 3 m |

Eva uses this diagram to convert between centimetres and metres.
Use Eva's method to convert:

- 130 cm
- 230 cm
- 235 cm
- 535 cm
- 547 cm

| | |
|---|---|
| 120 cm | |
| 100 cm | 20 cm |
| 1 m | 20 cm |
| 1m 20 cm | |

Mo and Alex each have a skipping rope.

Alex says,

I have the longest skipping rope. My skipping rope is $2\frac{1}{2}$ metres long.

Mo says,

My skipping rope is the longest because it is 220 cm and 220 is greater than $2\frac{1}{2}$

Who is correct?
Explain your answer.

Three children are partitioning 754 cm

Teddy says,

75 m and 4 cm

Whitney says,

7 m and 54 cm

Jack says,

54 cm and 7 m

Who is correct?
Explain why.

WALT: Find equivalent lengths in mm and cm

Watch this video https://vimeo.com/467395290

# Equivalent Lengths – mm & cm

## Notes and Guidance

Children recognise that 10 mm is equivalent to 1 cm. They use this knowledge to convert other multiples of 10 mm into centimetres and vice versa.

When looking at lengths that are not multiples of 10, they partition the measurement and convert into centimetres and millimetres. At this stage, children do not use decimals. This is introduced in Year 4.

## Mathematical Talk

What items might we measure using millimetres rather than centimetres?

If there are 10 mm in 1 cm, how many mm would there be in 2 cm?

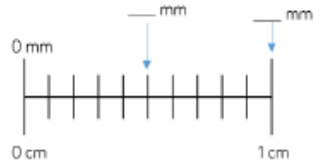
How many millimetres are in $\frac{1}{2}$ cm?

How many different ways can you partition 54 cm?

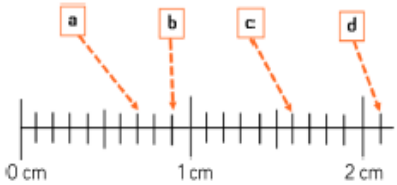
## Varied Fluency

R

Fill in the blanks.



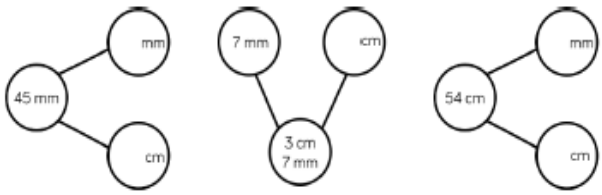

There are ___ mm in 1 cm.




a = ___ cm ___ mm
b = ___ cm ___ mm
c = ___ cm ___ mm
d = ___ cm ___ mm

Measure different items around your classroom.
Record your measurements in a table in cm and mm, and just mm.

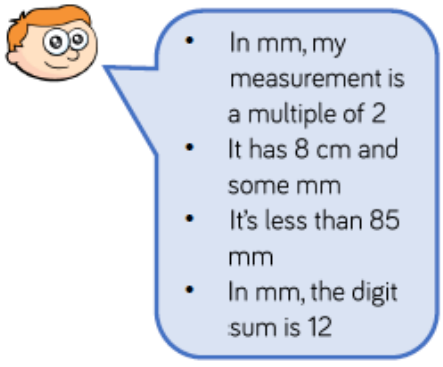
Complete the part whole models.




Rosie is measuring a sunflower using a 30 cm ruler.
Rosie says,


Rosie is incorrect.
Explain what mistake she might have made.
How tall is the sunflower?

Ron is thinking of a measurement.
Use his clues to work out which measurement he is thinking of.



WALT: Convert between km and m

Watch this video https://vimeo.com/468144086

# Kilometres

## Notes and Guidance

Children multiply and divide by 1,000 to convert between kilometres and metres.
They apply their understanding of adding and subtracting with four-digit numbers to find two lengths that add up to a whole number of kilometres.
Children find fractions of kilometres, using their Year 3 knowledge of finding fractions of amounts. Encourage children to use bar models to support their understanding.

## Mathematical Talk

Can you research different athletic running races? What different distances are the races? Can you convert the distances from metres into kilometres? Which other sports have races over distances measured in metres or kilometres?
If 10 children ran 100 metres each, how far would they run altogether? Can we go outside and do this? How long do you think it will take to run 1 kilometre?
How can we calculate half a kilometre? Can you find other fractions of a kilometre?

## Varied Fluency

Complete the statements.

3,000 m = ___ km

8 km = _____ m

5 km = ___ m

3 km + 6 km = _____ m

500 m = ___ km

250 m = _____ km

9,500 m = ___ km

4,500 m – 2,000 m = _____ km

Complete the bar models.

| 3 kilometres | |
|---|---|
| | 1,800 metres |

| ___ km | |
|---|---|
| 2,870 m | 4,130 m |

Use <, > or = to make the statements correct.

500 m ◯ $\frac{1}{2}$ km

7 km ◯ 800 m

5 km ◯ 500 m

Dexter and Rosie walk 15 kilometres altogether for charity.
Rosie walks double the distance that Dexter walks.
How far does Dexter walk?

Dexter and Rosie each raise £1 for every 500 metres they walk.
How much money do they each make?

Complete the missing measurements so that each line of three gives a total distance of 2 km.