Monday 14th July 2025

MPI: Understanding negative numbers

1 Here are the buttons in a lift.

Two of the button numbers have worn off.

a) What are the two blank buttons?

b) Max is on floor 2

He goes down 2 floors.

What floor is he on now?

c) Rosie is on floor 1

She goes down 2 floors.

What floor is she on now?

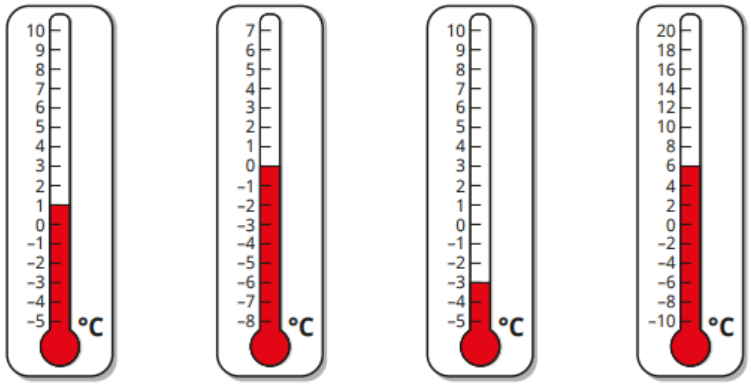
d) Dexter is on floor −2

He goes up 3 floors.

What floor is he on now?

How did you work them out?

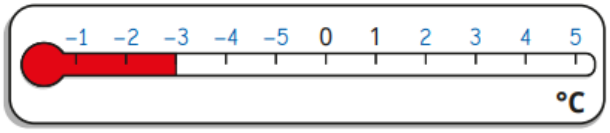
2 **a)** Write the temperature shown on each thermometer.



b) What is the warmest temperature shown?

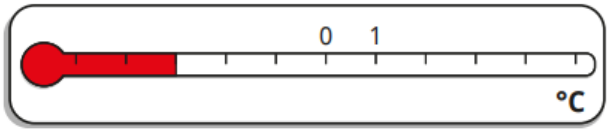
c) What is the coldest temperature shown?

3 Tiny has labelled a thermometer to work out the temperature.



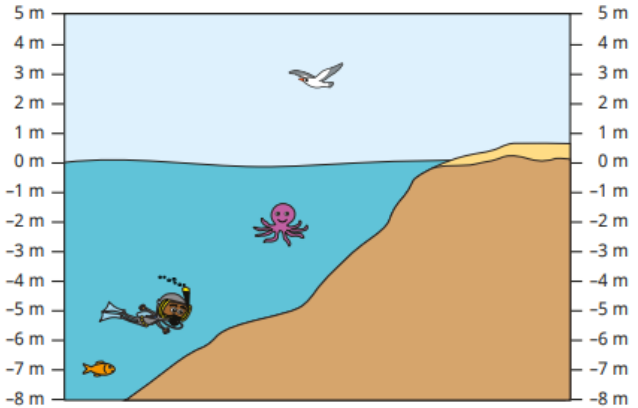
a) What mistake has Tiny made?

b) Correctly label the thermometer.



c) What temperature is shown?

4 The diagram shows distances above and below sea level.



a) At what height is the bird flying?

b) Is the diver or the octopus swimming deeper in the water?

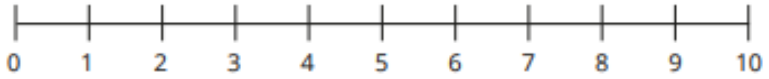
c) Complete the sentence.

The fish is swimming at ☐ m.

Tuesday 15th July 2025

MPI: Compare and order negative numbers

1 **a)** Use the number line to compare the numbers.



5 ◯ 2 3 ◯ 8 1 ◯ 0

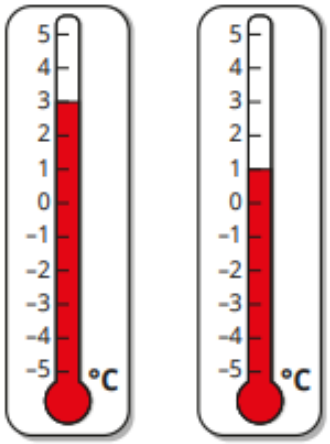
b) Write **greater** or **less** to complete the sentences.

Numbers to the left on a number line are _____ than numbers to the right.

Numbers to the right on a number line are _____ than numbers to the left.

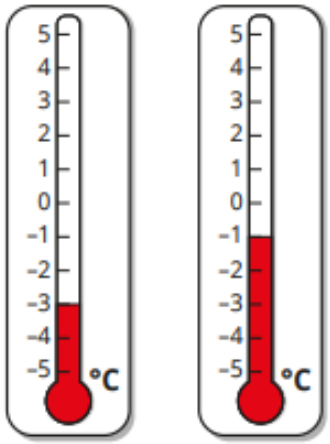
2 Write **<** or **>** to compare the temperatures.

a)



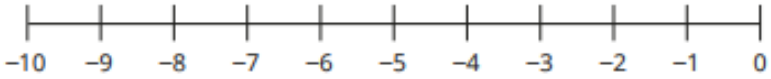
3 °C ◯ 1 °C

b)



−3 °C ◯ −1 °C

3 Use the number line to compare the numbers.



−5 ◯ −2 −3 ◯ −8 −1 ◯ 0

4 Use the number line to compare the numbers.

−5 ◯ 2 3 ◯ −8 −1 ◯ 1

What do you notice?

5 **a)** Use the number line to write the numbers in ascending order.

−4	3	4	−1	0

b) Now write the numbers in descending order.

What do you notice?

6 Order the temperatures, starting with the warmest temperature.

5 °C	−15 °C	4 °C	−30 °C	−5 °C

Tuesday 15th July 2025– sheet 2

MPI: Compare and order negative numbers

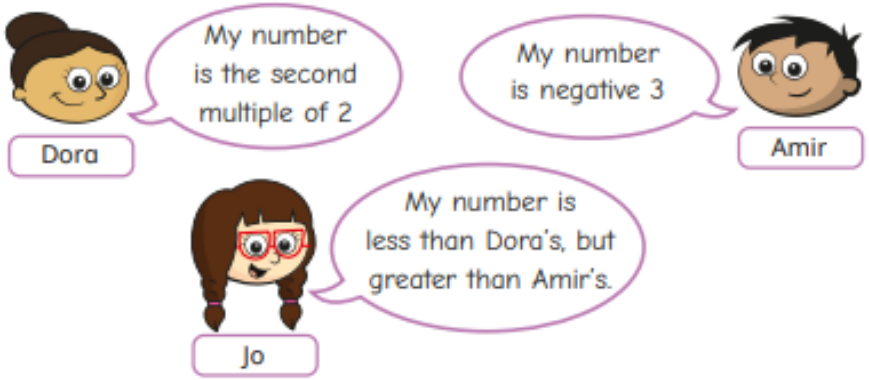
Tiny is trying to order some numbers, starting with the greatest.

−7, 6, −4, 3, −1, 0

a) What mistake has Tiny made?

b) Write the numbers in the correct order.

Dora, Amir and Jo are each thinking of a number.



What number could Jo be thinking of?

Find all the possible answers.

On Monday, the temperature in London was 0 °C. In Rome it was −2 °C.

On Tuesday, London is 4 degrees colder than on Monday.

Rome is 4 degrees warmer than on Monday.

On Tuesday, the temperature in Paris is warmer than London, but colder than Rome.

What could the temperature in Paris be?

Find all the possible answers.

Tuesday 15th July 2025

MPI: Compare and order negative numbers– sheet 2

Tiny is trying to order some numbers, starting with the greatest.

−7, 6, −4, 3, −1, 0

a) What mistake has Tiny made?

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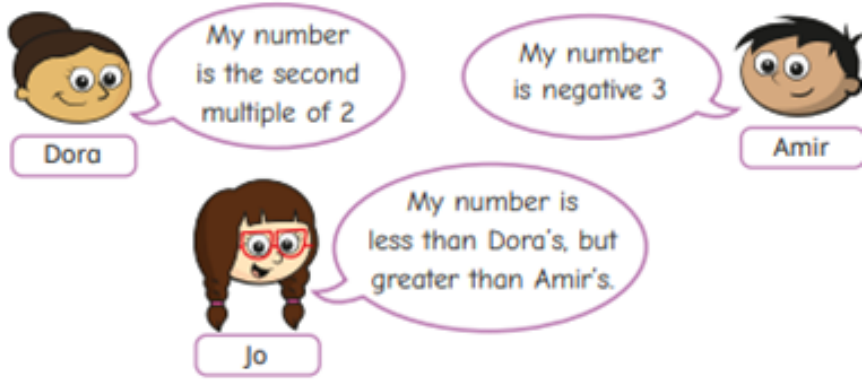
Dora, Amir and Jo are each thinking of a number.



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On Tuesday, the temperature in Paris is warmer than London, but colder than Rome.

What could the temperature in Paris be?

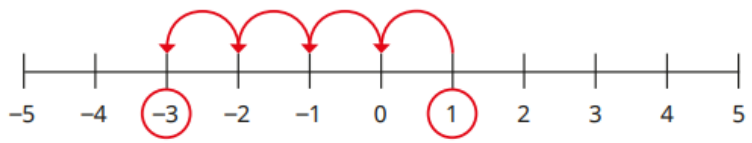
Find all the possible answers.

Wednesday 16th July 2025

MPI: Find the difference

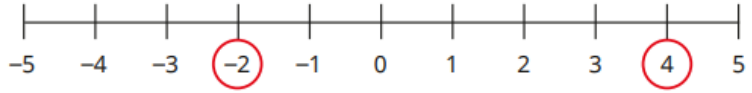
1 Use the number lines to find the differences.

a)



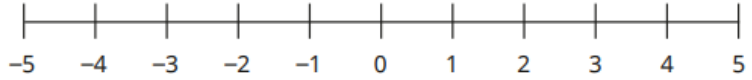
The difference between 1 and −3

b)



The difference between −2 and 4

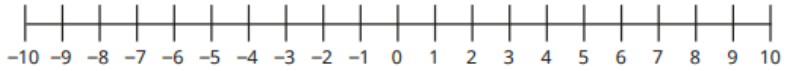
c)



The difference between 5 and −4

What do you notice?

2 Here is a number line from −10 to 10



a) How many jumps are there from 4 to zero?

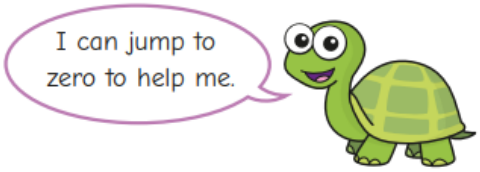
b) How many jumps are there from −4 to zero?

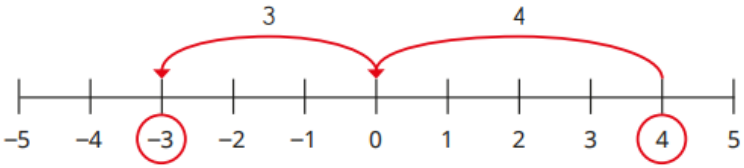
c) How many jumps are there from −8 to zero?

d) How many jumps are there from 8 to zero?

What do you notice?

3 Tiny is finding the difference between 4 and −3





What is the difference between 4 and −3?

What do you notice?

4 Use the number line to find the differences by jumping to and from zero.

a) The difference between 2 and −3

b) The difference between −3 and 7

c) The difference between 1 and −6

d) The difference between −9 and 9

5 Find the differences between the pairs of numbers.

a) 17 and −21

b) −23 and 8

c) 52 and −33

d) 109 and −36

Wednesday 16th July 2025—sheet 2

MPI: Find the difference

The average temperature in July is 26 °C.

The average temperature in January is –9 °C.

What is the difference in average temperatures between January and July?

Mr Rose parks his car on floor –3 of a building.

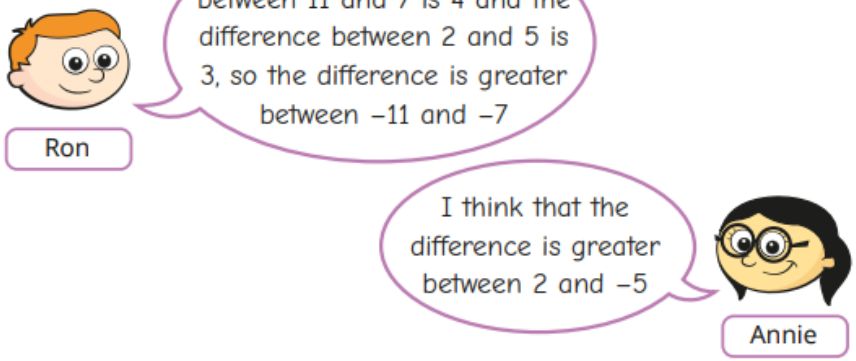
He goes up 8 floors in a lift to his office.

He then goes down 2 floors for a meeting.

How many floors does Mr Rose need to go down to get back to his car?

Ron and Annie are comparing the differences between the pairs of numbers.

–11 and –7	2 and –5



Who do you agree with?

Explain your reasons.

Wednesday 16th July 2025

MPI: Find the difference sheet 2

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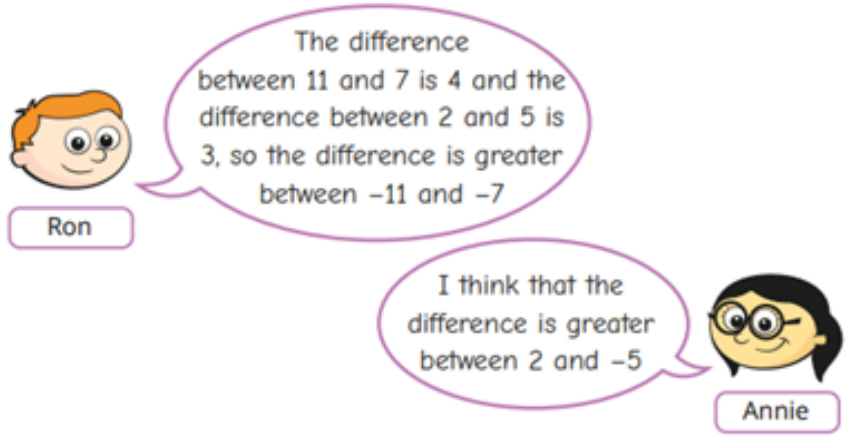

Who do you agree with?

Explain your reasons.