



Maths

Calculation Policy

Place value - negative numbers

2024

Year Four → page 3

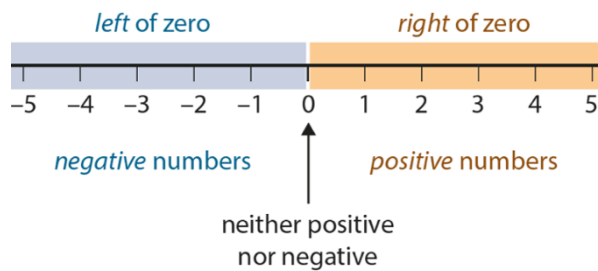
Year Five → page 4

Year Six → page 8

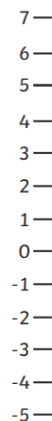
Year Four:

0 → I know that numbers greater than 0 are positive numbers.

1. Horizontal number line



2. Vertical number line



0 → I know there are numbers less than 0 and these are called negative numbers.
Same as previous

0 → I can use the negative sign to identify negative numbers.
Same as previous

0 → I can identify patterns and relationships between positive and negative numbers
10 and -10 are both equal distances from 0.
Same as previous

0 → I can count through 0 from a positive number to a negative number
Same as previous

0 → I can count through 0 from a negative number to a positive number
Same as previous

Year Five:

0 → I know that numbers greater than 0 are positive numbers.

See previous year group

0 → I know there are numbers less than 0 and these are called negative numbers.

See previous year group

0 → I can use the negative sign to identify negative numbers.

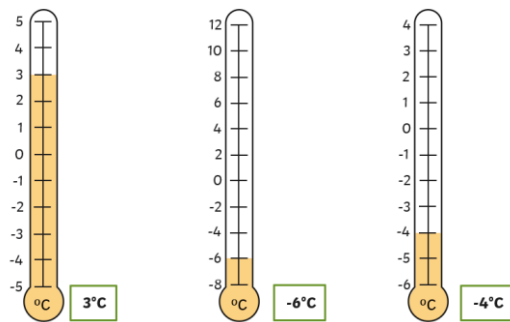
See previous year group

0 → I can identify patterns and relationships between positive and negative numbers
10 and -10 are both equal distances from 0.

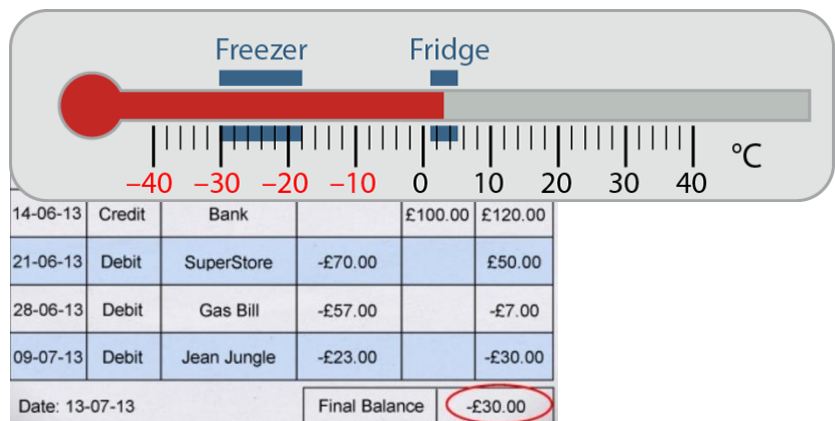
See previous year group

0 → I can understand negative numbers in context

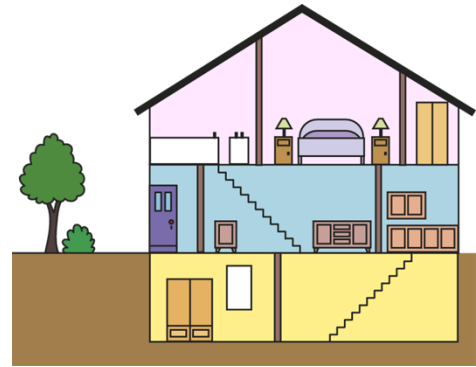
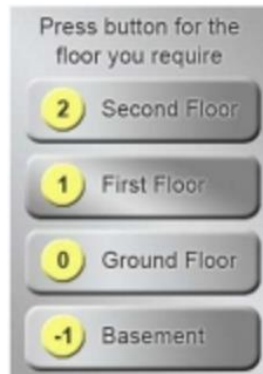
1. Temperatures



2. Bank balance

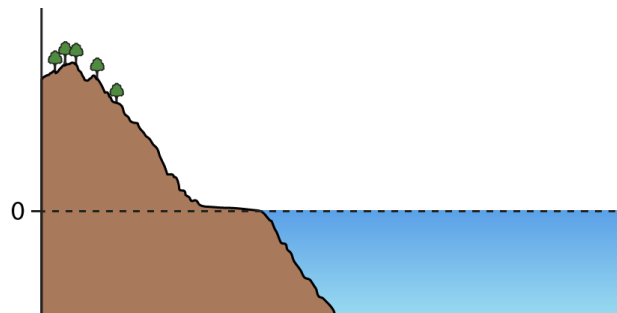
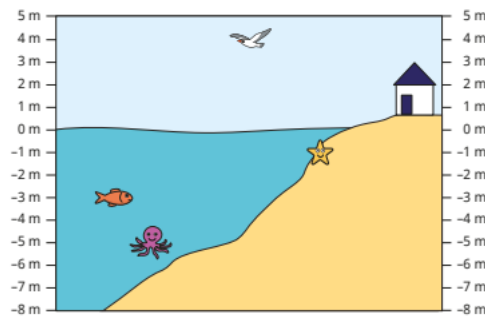


3. Floor numbers



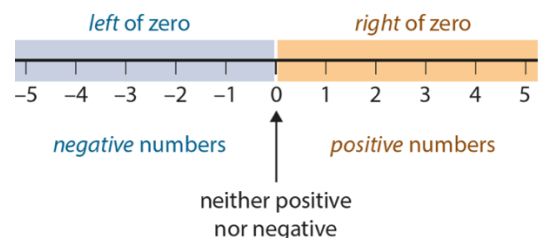
4. sea level

The diagram shows distances above and below sea level.



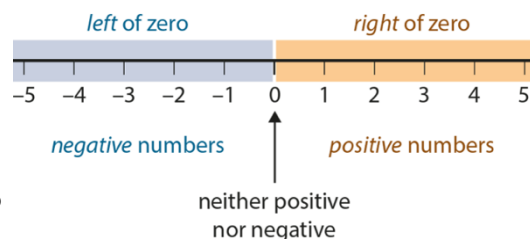
➔ I can understand which negative numbers are smaller and why
e.g. $\rightarrow -4$ is smaller than -3 because it is further away

1. Number line $\rightarrow$ Count jumps from 0 to -3 then 0 to -4 . There are more jumps to -4 but it is further from 0 so the numbers are getting smaller.

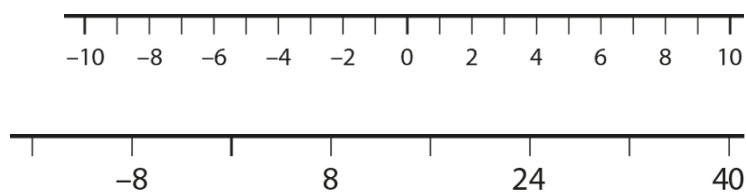


➔ I can position negative numbers on a number line

1. Number lines with intervals of 1

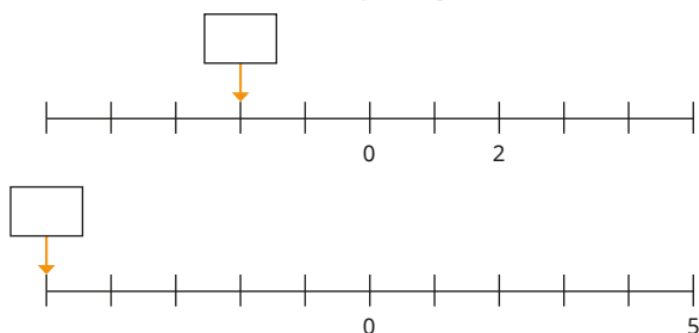


2. Number lines with different intervals



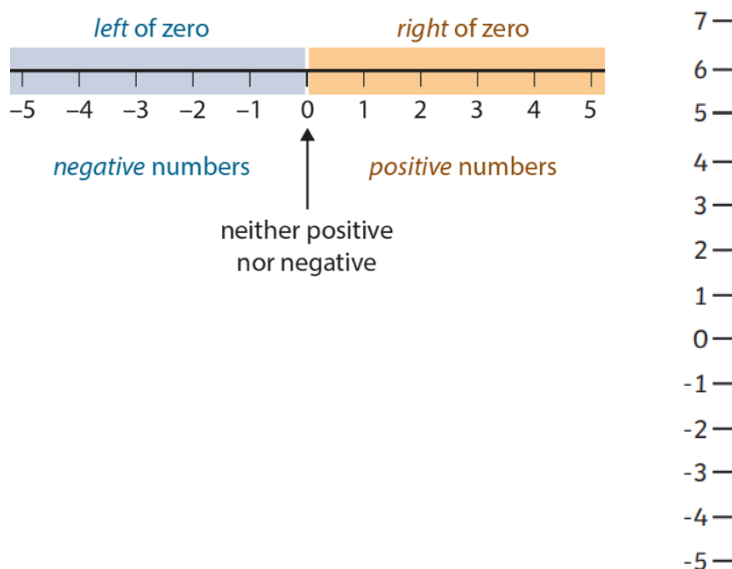
3. Blank number lines

- What numbers are the arrows pointing to?



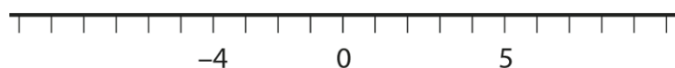
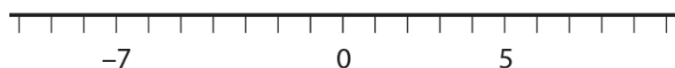
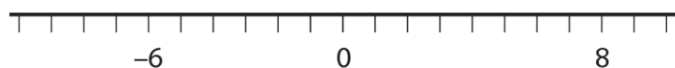
➡ I can compare negative numbers

1. Horizontal and vertical number lines



Example question:

- 'For each number line, circle the number that is further from zero.'



2. Use knowledge of the numbers' distance from 0

Example question:

- 'For each pair, put a tick in the correct column.'

Number pair		Positive number further from zero	Negative number further from zero	Both numbers same distance from zero
-6	12	✓		
-12	6			
-6	6			
10	-1			
10	-10			
10	-100			

0 → I can order negative numbers

Same as previous

0 → I can count through 0 from a positive number to a negative number

See previous year group

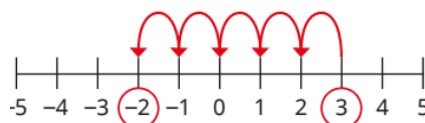
0 → I can count through 0 from a negative number to a positive number

See previous year group

0 → I can calculate the difference between a negative and positive number

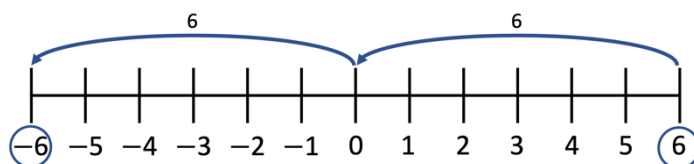
1. Counting back using a number line

Max is finding the difference between 3 and -2



The difference between 3 and -2 is 5

2. Using bridging through 0



Year 6:

0 → I can understand negative numbers in context

See previous year group

0 → I can understand which negative numbers are smaller and why
e.g. → -4 is smaller than -3 because it is further away

See previous year group

0 → I can position negative numbers on a number line

See previous year group

0 → I can compare negative numbers

See previous year group

0 → I can order negative numbers

See previous year group

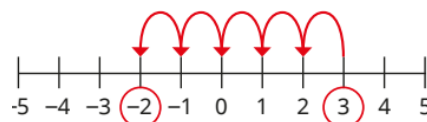
0 → I can calculate the difference between a negative and positive number

See previous year group

0 → I can calculate intervals across zero using a number line.

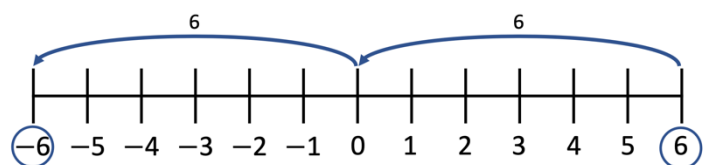
1. Counting back using a number line

Max is finding the difference between 3 and -2



The difference
between 3 and -2
is 5

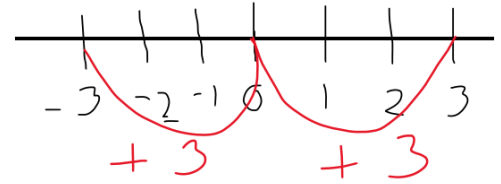
1. Using bridging through 0:
Use part part whole model to
bridge 0.
Consider how far away the
negative number is from 0.



0 → I can add a positive number to a negative number.

1. Using bridging through 0:
Use part part whole model to bridge 0.
Consider how far away the negative number is from 0.

$$\begin{array}{r} -3 + 6 = \\ \quad \quad \quad \begin{array}{c} 3 \quad 3 \end{array} \end{array}$$

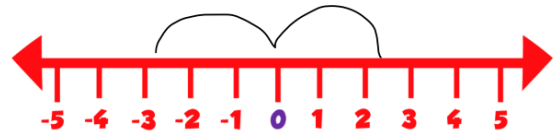


➡ I can subtract a positive number from a positive number that will result in a negative number.

- Using bridging through 0:
Use part part whole model to bridge 0.
Consider how far away the negative number is from 0.

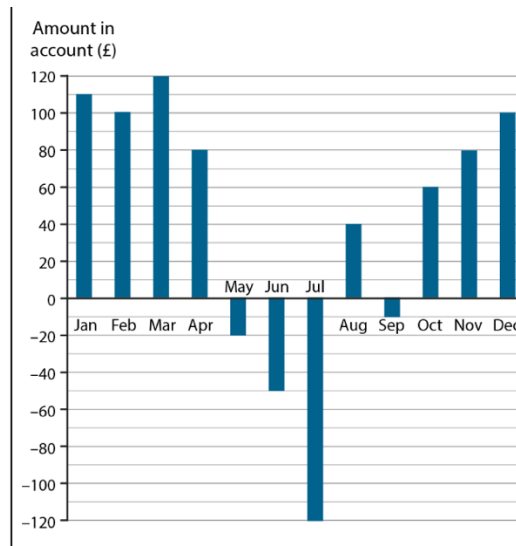
$$2 - 5 =$$

A part-part-whole model for the equation $2 - 5 =$. The number 5 is circled at the top. Two lines connect it to two circles below, containing the numbers 2 and 3 respectively.



➡ I can link negative numbers to axis on graphs

- Bar charts



2. Line graphs and co-ordinates

