

Negative numbers in context and on the number line

WHAT THIS LESSON TEACHES

A number less than zero is written with a minus sign in front of it such as -4 . On a number line these sit to the left of zero.

- A thermometer reading of -4°C means four degrees below freezing.
- A temperature falling from $+2^{\circ}\text{C}$ to -5°C is a drop of 7 degrees.

MODEL THIS ON THE BOARD

TEMPERATURE CHANGE ACROSS ZERO

- 1 Start at $+2^{\circ}\text{C}$ and count down to zero: that is 2 degrees.
- 2 Then count from zero down to -5°C : that is 5 more degrees.
- 3 Add the two parts: $2 + 5 = 7$ degrees drop.

ANSWER KEY

c) 0; left: -8 , -5 , -3

Q1: 8°C

Q2: 3 floors

Q3: $+2$

Q4: 11°C

Q5: 9°C

Q6: -8 , -5 left of zero; $+6$ right of zero

a) Always — By definition negative numbers sit left of zero.

b) Never — -3 is always warmer than -8 because it is closer to zero.

c) Always — Any change from positive to negative must cross zero.

d) Always — Temperatures below zero are common in winter.

EXTENSION SHEET · STRETCH ANSWERS

S1: $-9 < 12 < 14 < 15$

S2: $-10 < -1 < 9 < 15$