Negative Numbers

Challenge Cards

Lily and Adam work together. They are counting in steps forwards and backwards, including negative numbers.

Lily gives Adam the starting number of 12 and tells him to count in steps of -5.

Adam counts: 12, 7, 2, -3, -8, -13, -18, -23, -28, -33

Can you repeat this challenge with a partner? Give them a starting number and a sequence of steps to follow. Remember that you can choose whether to go forwards or backwards and your start number could be negative or positive.

Jiang writes the following statements:

- Negative nine is thirteen less than four.
- -23 + 17 = -40
- 34 more than -12 = 22
- The temperature inside is 15°C. Outside it is 22°C colder, so outside the temperature is 7°C.

Giving reasons, explain whether each statement is true or false.

Lily writes the following calculations:

14 - 25 =

-4 + 17 =

Write an explanation, including visual methods, showing how to calculate the answers to these problems.

Compare your explanations with a partner.
Can you make any improvements?

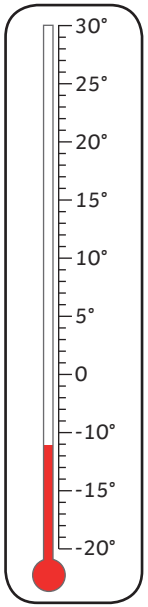
Adam writes the calculation: $-5 + 18 = 13$

He writes a real-life example with money to illustrate the calculation.

"I owe my dad £5. I sell a computer game to a friend for £18. After I pay back my dad, I have £13 left."

He writes another calculation: $16 - 19 = -3$

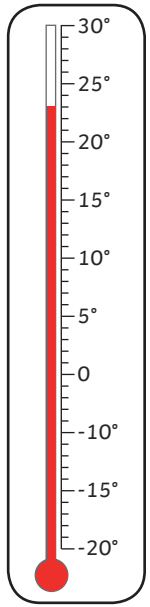
Write a real-life example with money to illustrate the calculation. Share with a partner and make any improvements.



Jiang has two thermometers. He places one in a bowl of ice with some salt and he keeps the other on the table.

Write two calculations with explanations to show the difference in temperature between the salted ice and the room.

Write your own scenario with two thermometers, where both temperatures are negative, and explain with calculations.



Lily writes the following linear sequences:

-13, -9, -3, 1, 5, 9, 13

16, 9, 2, -3, -10, -17

29, 18, 7, -6, -15, -24

Can you spot and explain the errors that Lily has made?

Write some incorrect sequences for a partner to check.

Adam says, "When you count backwards in tens from a positive number through zero, the ones digit will always stay the same."

Explain why Adam is incorrect, but when he might be correct.

Compare your answers with a partner and make any improvements to your own explanation.