Negative Numbers

Aim: Count forwards and backwards past zero into negative numbers. Solve problems using negative numbers and give reasons for answers.

Denis the Delivery Man

Denis has 10 parcels to deliver in a block of flats. The deliveries need to be made in a certain order depending on when people are at home. The flats have floors above and below ground level. As Denis delivers the parcels, mark the floors he visits in the order that he makes the deliveries. Remember to use the negative value to mark the basement floors.

	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor 3	
	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor 0	
	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor ☐	Order ☐
	Floor -6	

1. Denis starts on the ground floor (0) and his first delivery is on floor 2.
2. He then goes down 4 floors.
3. Denis has to go down another 3 floors next.
4. Once that parcel is delivered, he travels up 10 floors.
5. After that, Denis goes down to basement level -1. How many floors has he travelled to get there?

6. Up he goes again. This time 5 floors up. Mark which floor he is at now.
7. Back down 7 floors. Where is he now?
8. Up to floor 1 next. How many floors has Denis gone up this time?
9. Finally, back down 5 floors.
10. Where is Denis' last delivery?

    How many floors must he travel to get there?

    In which direction is he going?

Challenge

If he starts and finishes his round at ground level (Floor 0), how many floors has Denis stopped at or travelled past on his delivery round today?

Denis thinks he could have done his round travelling to fewer floors. Do you agree?

Give reasons for your answer.