

Bronze

1a. A. -8; B. -6; C. -1; D. 4

2a. 14°C

3a. A. -5; B. -7

4a. False, because it's pointing to -3.

1b. Bert is incorrect because A should be pointing to -6.

2b. Punita is incorrect, as halfway between 4 and -8 is -2.

3b. £15

Silver

5a. From L-R: -15, -7, -4, -1, 12

6a. 31°C

7a. A. -28; B. -23

8a. False, because it's pointing to -24.

4b. Betty is incorrect because B should be pointing to -9.

5b. Avneet is incorrect, as halfway between 19 and -17 is 1.

6b. -£15

Gold

9a. From L-R: -29, -22, -18, -12, -1

10a. 51°C

11a. A. -35; B. -23

12a. False, because it's pointing to -35.

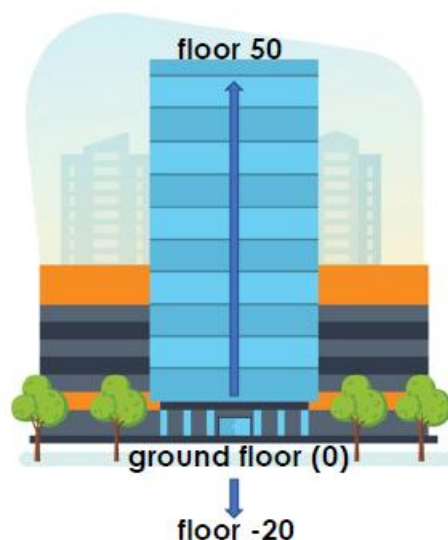
7b. Brian is incorrect because B should be pointing to 16.

8b. Annabel is incorrect, as halfway between 30 and -20 is 5.

9b. £18

Challenge

1. This office block goes from floor -20 to floor 50. Martin is on floor -16 and needs to get to the ground floor (0). However, the lift is faulty and will only ascend or descend in multiples of 3 or 7.



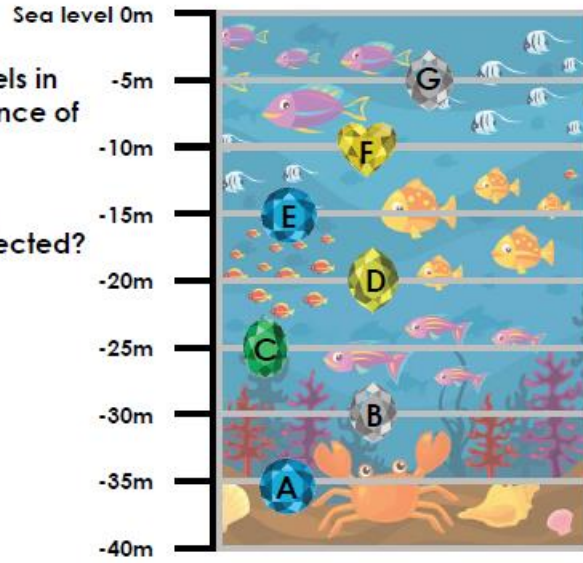
How many different ways can the lift travel to reach the ground floor?

Various answers, for example: ascend 15 to floor -1; ascend 7 to floor 6; descend 6 to ground floor 0.

2. Karen and Rory are collecting jewels from under the sea and returning them to the treasure chest which is hidden in the sand dunes 20m above the sea. Each time, they must start at the treasure chest. There is more than one of each jewel, but they can only collect one at a time.

When they have collected six of the jewels in total, Karen has travelled a vertical distance of 250m and Rory has travelled a vertical distance of 220m.

Which jewels could they each have collected?



Various answers, for example:

Karen: A (110m), C (90m), G (50m) Rory: C (90m), E (70m), F (60m)