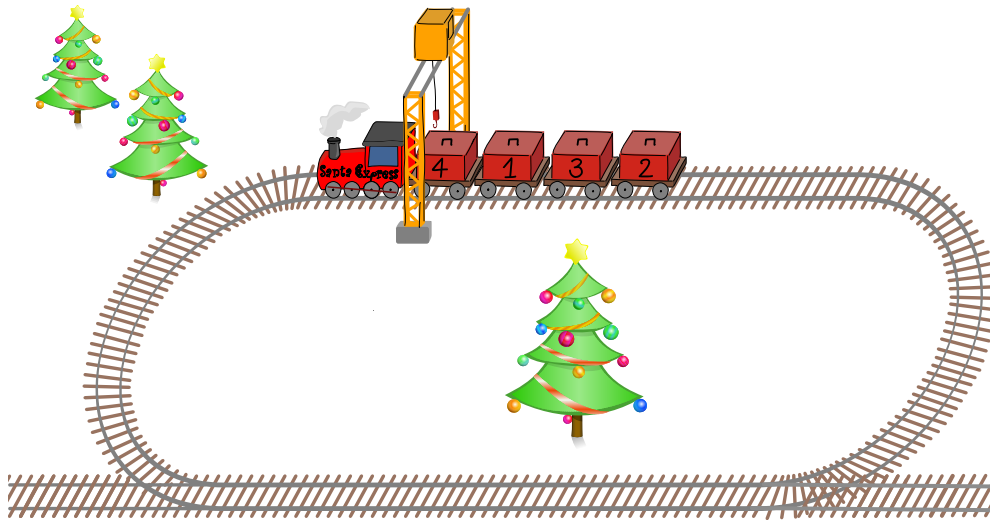




Unloading Santa's train



Santa's train consists of an engine followed by wagons, each holding a numbered box full of presents. The boxes must be unloaded in increasing order, starting from box 1. To unload a box, it must be positioned directly below the crane. The crane is in a fixed position and the train can only move forward in a loop. Usually, this means that several rounds are needed to unload all the boxes. Each round begins with the engine directly under the crane.

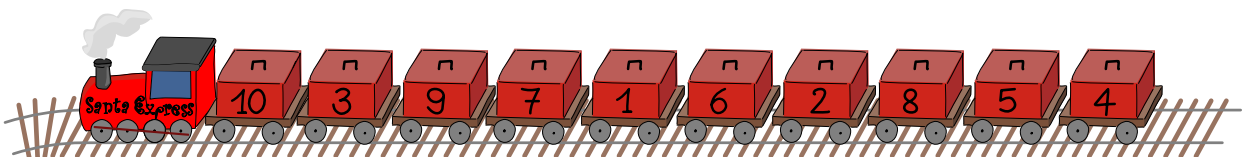


In the example shown, the boxes have to be unloaded in the order 1, 2, 3, 4 and three rounds are needed to do this:

- In the first round of unloading, the train skips box 4, unloads box 1, skips box 3, and unloads box 2.
- The train then goes around the track. In the second round of unloading, the train skips box 4, skips the empty wagon, and unloads box 3.
- The train then has to go for a third round to unload box 4.

QUESTION

How many rounds are needed to unload all the boxes from this train?



- A. 5
- B. 6
- C. 7
- D. 8

