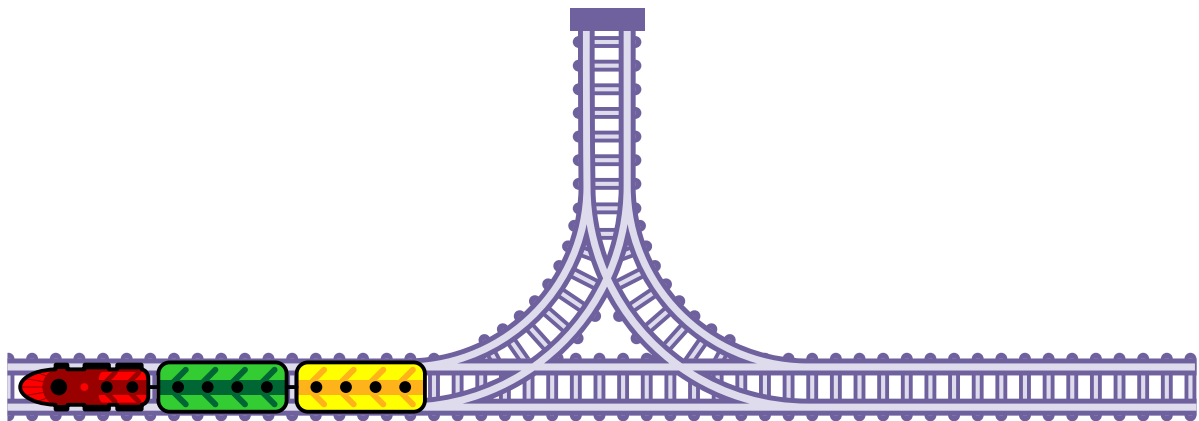


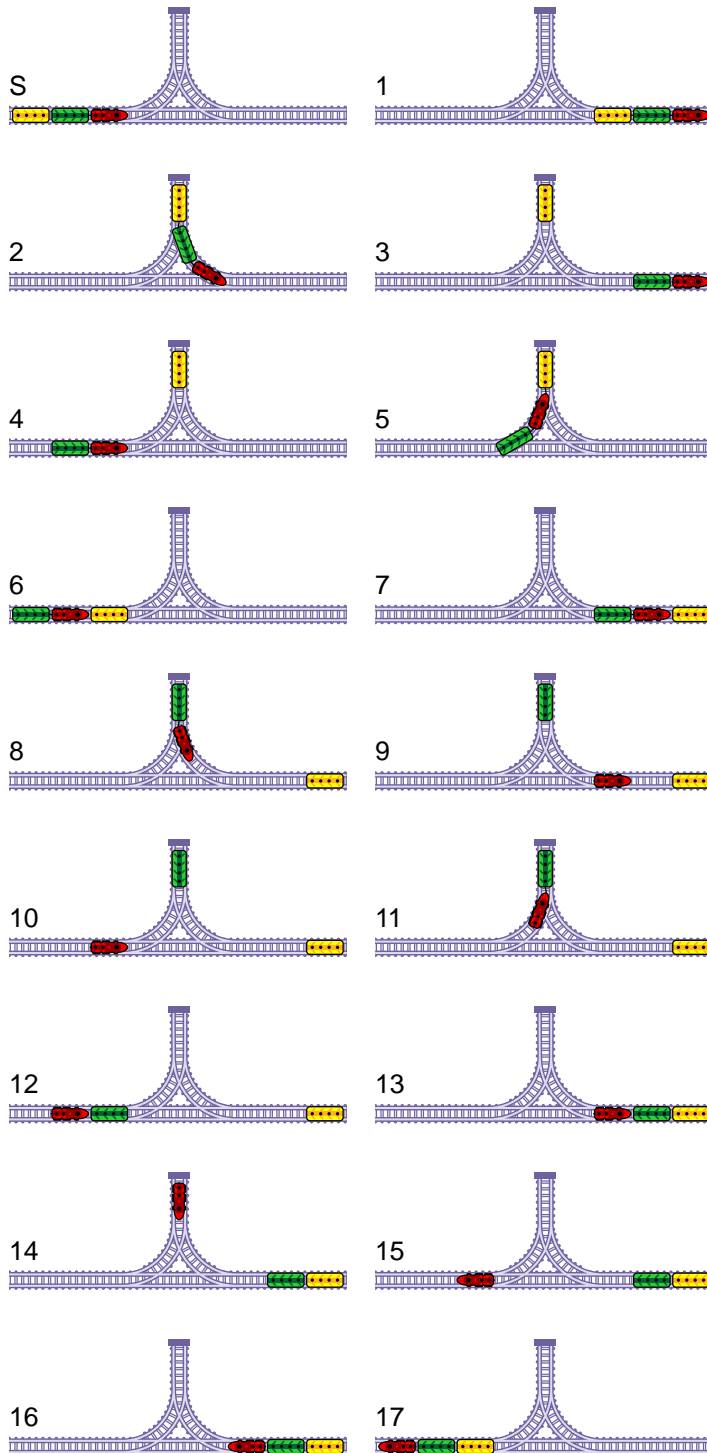
Start Position



Finish Position

This is the same as the Turning Train problem, except this time there is an engine, a railway car and a caboose.

The train in the upper illustration must turn around and head back to Edmonton. After turning, the train and the railway car should be facing towards Edmonton as shown in the lower illustration. The engine and the railway car can be coupled and uncoupled in any way. The engine can push and pull with its front end as well as its back end. There is just enough room for one car or engine on the straight part of the sliding, and enough room for both the engine and the car at the other straight part of the track past the sliding. While the car and engine are being moved to their new positions, they can face different directions.



1. Train goes past the siding to the right (Step 1), backs the caboose into the siding (Step 2) and uncouples the caboose.

2. The engine (and attached railcar) comes out of the siding to the right (Step 3), backs past the siding towards Edmonton (Step 4), goes forward into the siding (Step 5) and pulls the caboose out (Step 6). The caboose is now facing the correct way but the engine and railcar are not.

3. The engine (and railcar) pushes the caboose past the siding to the right (Step 7), uncouples the caboose, and the engine backs the railcar into the siding (Step 8) and uncouples.

4. The engine comes out of the siding to the right (Step 9), backs past the siding towards Edmonton (Step 10), goes forward into the siding (Step 11) and pulls the railcar out (Step 12). The caboose and the railcar are now facing the correct way but the engine isn't.

5. The engine pushes the railcar past the siding to the right (Step 13), making it coupling with the caboose, then decouples, and backs into the siding (Step 14).

6. The engine leaves the siding towards Edmonton (Step 15) - it is now facing the correct way - and backs up and connects with the railcar (Step 16). Now the train is successfully heading towards Edmonton (Step 17).