

The picture above shows six towns and the distances between them. A travelling salesman wants to visit each town and then return back to where he started.

- a) What is the shortest total distance he can travel?
- b) Does it matter which town he starts in?
- c) How can you be sure of your answer?
- d) Starting from Harlow, how many paths are there that visit each town exactly once and return to Harlow?