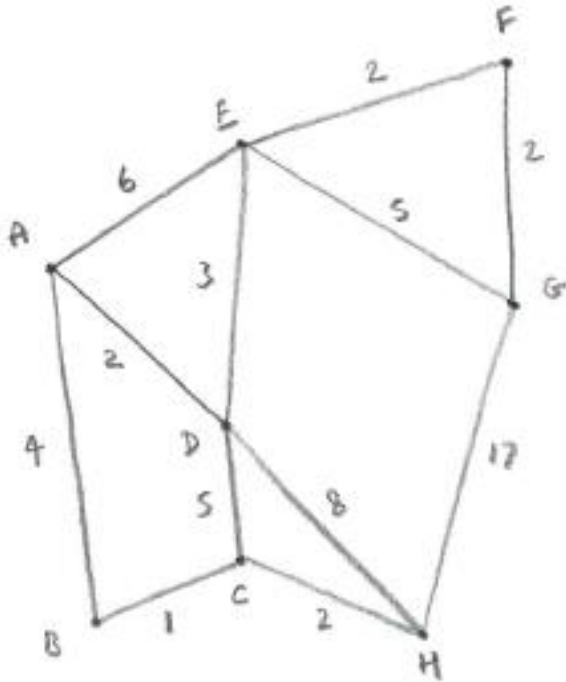


Route Inspection Exercise (1 page; 14/12/13)

Arnold, who is a railway enthusiast, wishes to travel along each stretch of railway linking the cities A-H of a particular country - as shown in the diagram, with the times (in hours) for each stretch. The total time for all the stretches is 57 hours.



- (i) Initially he plans to set out from A and return to A. Find a route that covers each stretch of railway at least once, in the shortest possible time, and find the time taken.
- (ii) There is a change of plan, and now Arnold wishes to start at A and finish at H (still covering each stretch at least once). Find the new time taken for the quickest route.
- (iii) Arnold's wife wants the time reduced. If he has a free choice as to the starting and finishing cities, which should he choose, and what will the new time be?

