



(ii) Determine a minimal spanning tree in  $G$  (write down the order in which you choose the edges).

Now direct the graph as follows : all vertical edges are to be directed upwards, and all other edges from left to right. Call this directed graph  $G^*$ .

(iii) In  $G^*$ , apply Dijkstra's algorithm to find a shortest path from  $A$  to  $K$ . OBS! Write down all your calculations.

**6 (26p)** Prove that there are infinitely many right-angled triangles whose side-lengths are all integers.

**Obs!** Tentan beräknas vara färdigrättad den 27 oktober. Då kan den hämtas i mottagningsrummet mellan kl. 12:30-13:00. Tentamensresultat lämnas också ut per telefon 772 35 09 *efter* kl. 14:00.