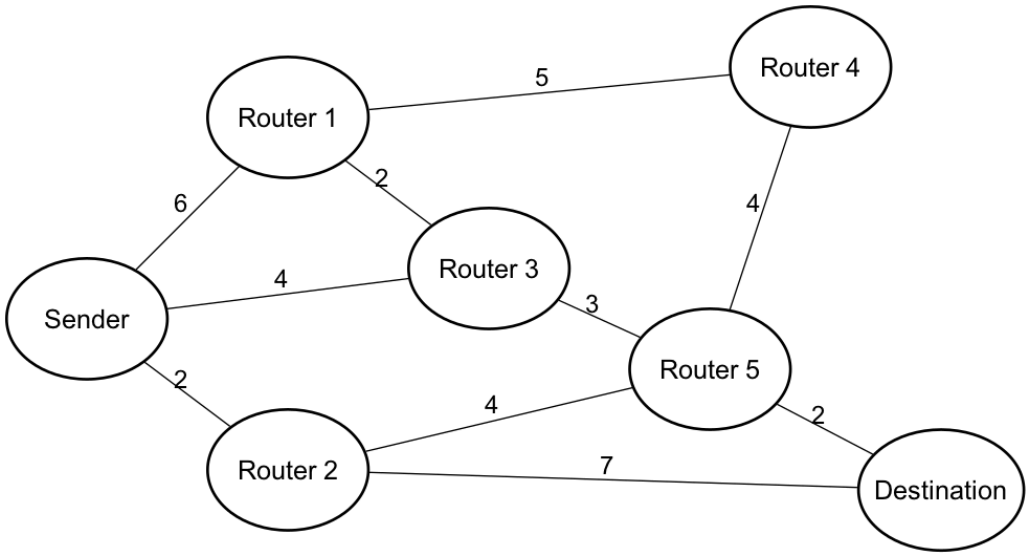
5 **(a)** Routers can use Dijkstra's or A* algorithm to find the most optimal paths for packets in **Packet Switched Networks**.

Calculate the shortest distance between the sender and each of the routers/destination in the diagram using Dijkstra's algorithm.

Show your working **and** write your answers in the table provided.



Working

.....

.....

.....

.....

.....

.....

.....

.....

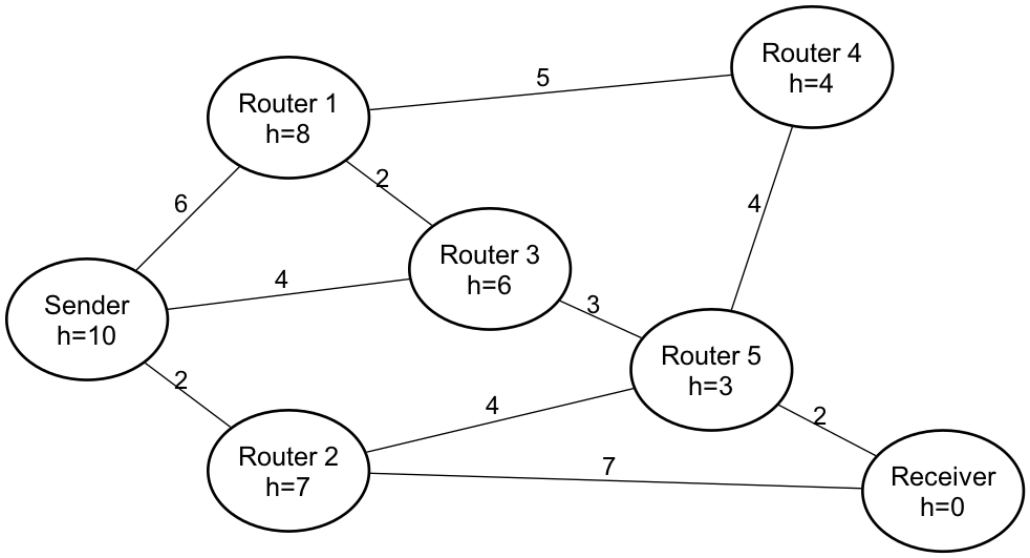
Answers

Router 1	Router 2	Router 3	Router 4	Router 5	Destination

[5]

(b) Now, find the shortest path between the sender and the receiver in the diagram using A* algorithm.

Show your working in the table provided.



Working

Node	Cost from Home Node (g)	Heuristic (h)	Total (f = g + h)

Answer

Final Path	

[5]

[Total: 10]