

Shortes distance

Find the shortest distance from home to the Dragon's lair using the Dijkstra's algorithm.



- A = Home
- B = Forest
- C = River
- D = Dragon's Lair

Go to	Distance	From
A	0km	A
B	5km	A
D	13km	A

c is not directly connected to *A*, hence its distance is not available.

Go to	Distance	From
✓A	0km	A
B	5km	A
C	9km	B
D	13km	A

Go to	Distance	From
✓A	0km	A
✓B	5km	A
C	9km	B
D	12km	C

Go to	Distance	From
✓A	0km	A
✓B	5km	A
✓C	9km	B
D	12km	C

Go to	Distance	From
✓A	0km	A
✓B	5km	A
✓C	9km	B
✓D	12km	C

Looking at the above-arranged data there are 2 possibilities to reach D from A

$D \leftarrow A(13\text{km})$ or $D \leftarrow C \leftarrow B \leftarrow A(12\text{km})$.

Ergo, the shortest distance from A to D is 12km if you consider the route $D \leftarrow C \leftarrow B \leftarrow A(12\text{km})$.