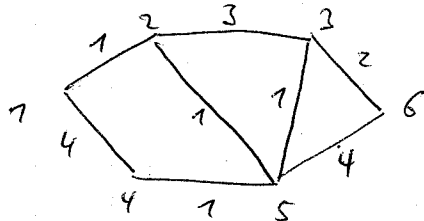1.) If the least cost path is unique
- same result expected
else
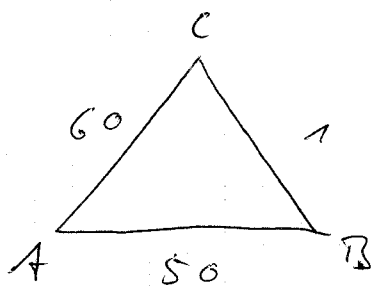- different results possible

2.) No   Dijkstra is a greedy algorithm

3.)

step	R	2	3	4	5	6
0	1	2,1	∞	4,1	∞	∞
1	1,2		4,2	**4,1**		
2	1,2,5		3,5	3,5		~~6,5~~
3	1,2,5,3					5,3

C advertise to be able to reach A with a cost of 6

$$C \rightarrow B \rightarrow C \rightarrow A$$

⇒ count to infinity problem

in DV protocols nodes do not have a complete knowledge of the network topology
- they base their decisions on limited information
- they only find the forwarding link to each destination

→ routing loops

<table>
<tr><td colspan="2">B</td><td colspan="2">D</td><td colspan="2">E</td><td colspan="2">Measurement</td></tr>
<tr><td>Dst</td><td>Dis</td><td>Dst</td><td>Dis</td><td>Dst</td><td>Dis</td><td>Dst</td><td>Dis</td></tr>
<tr><td>A</td><td>5</td><td>A</td><td>16</td><td>A</td><td>7</td><td>B</td><td>6</td></tr>
<tr><td>B</td><td>0</td><td>B</td><td>12</td><td>B</td><td>6</td><td>D</td><td>3</td></tr>
<tr><td>C</td><td>8</td><td>C</td><td>~~8~~6</td><td>C</td><td>3</td><td>E</td><td>5</td></tr>
<tr><td>D</td><td>12</td><td>D</td><td>0</td><td>D</td><td>9</td><td></td><td></td></tr>
<tr><td>E</td><td>6</td><td>E</td><td>9</td><td>E</td><td>0</td><td></td><td></td></tr>
<tr><td>F</td><td>2</td><td>F</td><td>10</td><td>F</td><td>4</td><td></td><td></td></tr>
</table>

Via

Destination

D( )	B	D	E
A	6+5=(11)	3+16=19	5+7=12
B	(6)	15	11
C			
D	18	(3)	14
E	17	12	(5)
F	(8)	13	9