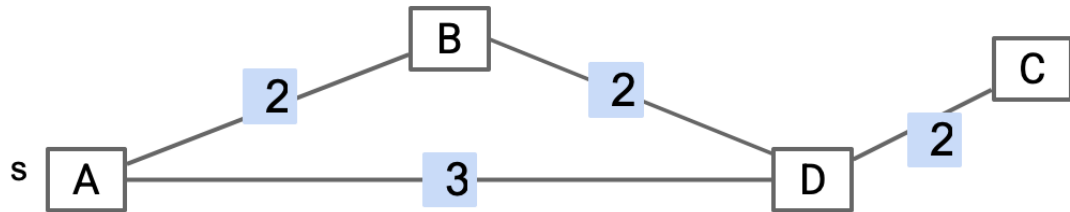
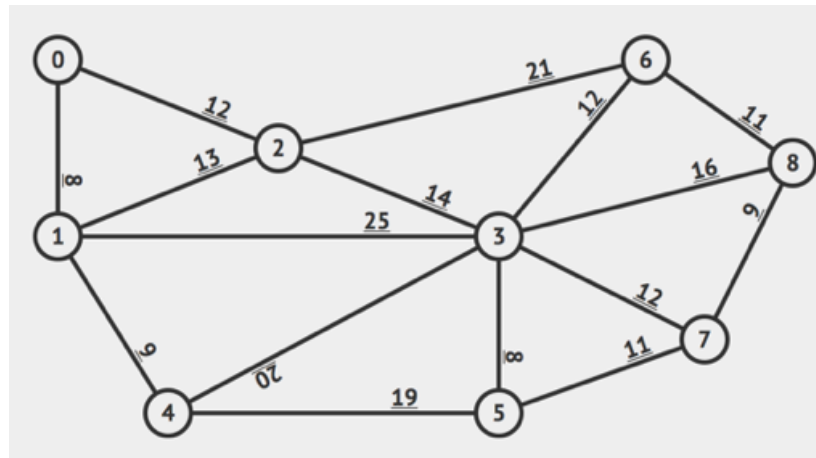


CS62: Fall 2025 | Lecture #22 (MSTs) worksheet | Prof. Li

1. Find the MST and the SPT from node s on the graph below. Are they the same? (What node would starting the SPT from make it the same as the MST?)

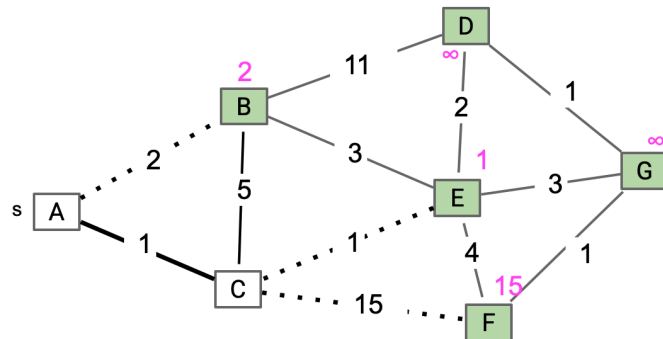


2. Starting at node 0, run Prim's algorithm to find the MST.



3. We just relaxed C's edges. Show distTo, edgeTo, and fringe after the next relaxation.

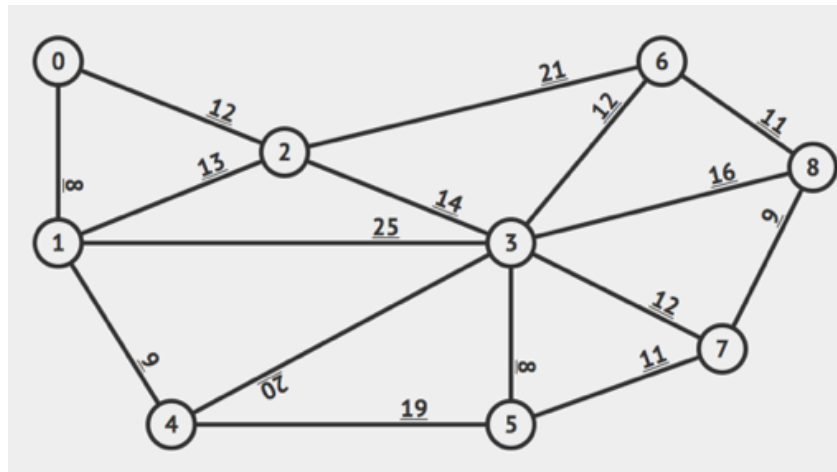
Node	distTo	edgeTo
A		-
B	2	A
C		A
D	∞	-
E	1	C
F	15	C
G	∞	-



Fringe: [(E: 1), (B: 2), (F: 15), (D: ∞), (G: ∞)]

4. Run Kruskal's to find the MST on this graph. What do you notice about this answer vs Q2's answer?

Edge	Weight
0-1	8
3-5	8
1-4	9
7-8	9
5-7	11
6-8	11
0-2	12
3-6	12
3-7	12
1-2	13
2-3	14
3-8	16
4-5	19
4-3	20
2-6	21
1-3	25



5. Run both Kruskal's and Prim's (starting at 0) on this graph. Do they give the same answer?

