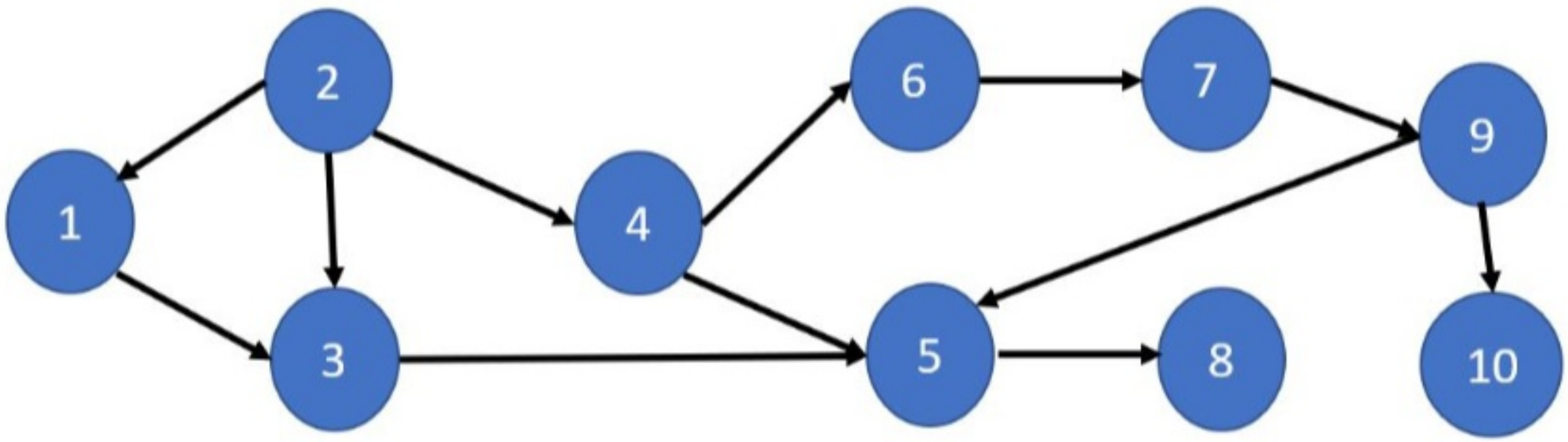
1. Consider the DAG shown below.

1 / 1 point



Select all true facts about the topological sort for this DAG.

- [ ] It cannot be topologically sorted since there is a cycle in the graph.
- [x] When we topologically sort this graph the first node in the topological sort must be 2.

Correct
Correct since 2 has no incoming edges and every other node in the graph does.

- [ ] The last node in the topological sort must necessarily be 10.
- [x] The last node in the topological sort must have no outgoing edges from it.

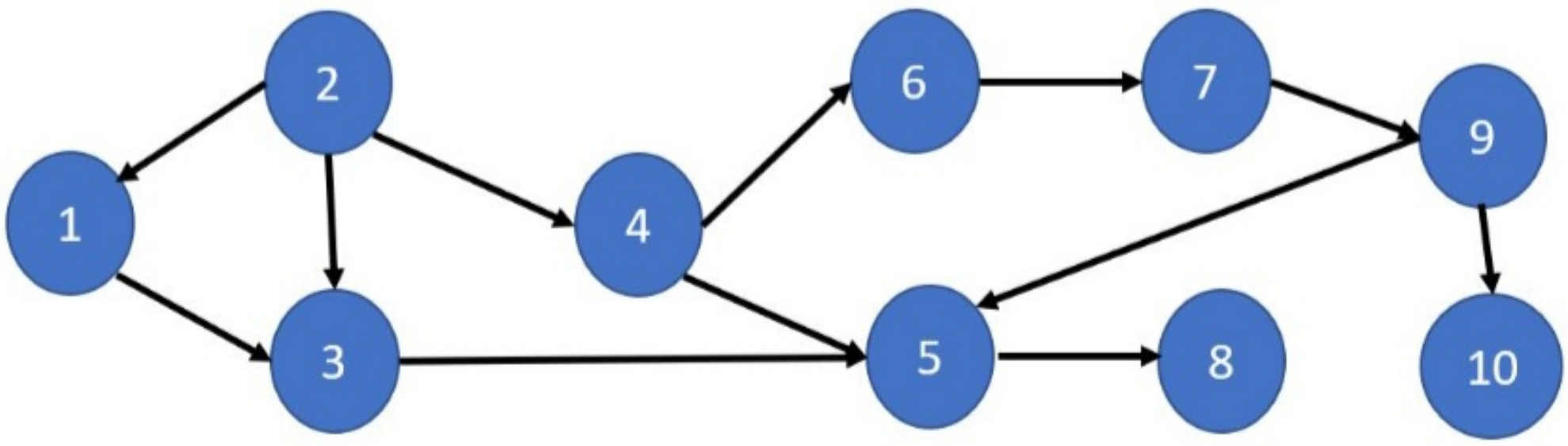
Correct
Correct.

- [x] There are multiple possible topological sorted orders for the vertices of this graph.

Correct
Correct.

2. Consider the DAG from Question 1 recalled below.

1 / 1 point



Running a DFS on all the nodes of the graph, we have the following discovery and finish times.

Node	Discovery	Finish
1	1	8
2	9	20
3	2	7
4	10	19
5	3	6
6	11	18
7	12	17
8	4	5
9	13	16
10	14	15

Answer questions about the full topological sorted order output by this DFS run.

- [ ] The topological sorted order is [1,2,3,4,5,6,7,8,9,10]
- [ ] The topological sorted order output would be [1,3,5,8,2,4,6,7,9,10]
- [x] The first node must be 2 since it has latest finish time

Correct
Correct

- [x] The last node must be 8 since has the earliest finish time.

Correct
Correct

- [x] The topological sorted order output by this DFS run is [2,4,6,7,9,10,1,3,5,8]

Correct
Correct