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1. Consider the following graph:

Vertices, $V = \{a, b, c, d, e, f\}$

Edges, $E = \{[a, b], [a, c], [b, d], [b, e], [c, e], [c, f]\}$

Where each array within E signifies an edge between the two mentioned vertices.

How many iterations of the queue would it take for the algorithm to traverse this graph completely?

- ☐ a: 3 [Explanation](#)
- ☐ b: 5 [Explanation](#)
- ☒ c: 6 [Explanation](#)
- ☐ d: 7 [Explanation](#)

2. When will the space complexity of BFS be greater than DFS? Note that maximum height in the options refers to the longest thread of vertices from the root to a leaf or final non-repeating vertex.

- ☒ a: If the maximum height is less than the maximum number of nodes in a single level [Explanation](#)
- ☐ b: If the maximum height is greater than the maximum number of nodes in a single level [Explanation](#)
- ☐ c: BFS and DFS have same the space complexity [Explanation](#)
- ☐ d: Space complexity of DFS is always greater than that of BFS [Explanation](#)

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