Quiz Submissions - Graphs Homework Quiz

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Retaken Attempt 2

Written: May 7, 2022 9:55 PM - May 7, 2022 10:00 PM

Submission View

Your quiz has been submitted successfully.

Show All Questions

Undirected graphs (small)

All the questions in this section refer to this (undirected) graph:

Question 1 Correct on previous attempt(s) **2 / 2 points**

How may vertices does the graph have?

Answer: 4

Question 2 Correct on previous attempt(s) **2 / 2 points**

How may edges does the graph have?

Answer: 3

Question 3 Correct on previous attempt(s) **2 / 2 points**

Which vertices are adjacent to vertex 1?

- ○ 0, 2, and 3
- ○ 2
- ◉ 0 and 2
- ○ 0

Question 4 Correct on previous attempt(s) **2 / 2 points**

Which vertices are adjacent to vertex 3?

- ◉ 2
- ○ None
- ○ 2, 1, and 0
- ○ 2 and 1

Question 5 Correct on previous attempt(s) **3 / 3 points**

Which of these is a possible order in which the vertices could be visited during a depth-first search starting at vertex 2? (Select all possible correct answers.)

- ☑ 2 3 1 0
- ☐ 2 1 3 0
- ☑ 2 1 0 3

Question 6 Correct on previous attempt(s) **3 / 3 points**

Which of these is a possible order in which the vertices could be visited during a breadth-first search starting at vertex 2? (Select all possible correct answers.)

- [x] 2 3 1 0
- [x] 2 1 3 0
- [ ] 2 1 0 3

Question 7 Correct on previous attempt(s) **2 / 2 points**

This graph has at least one cycle.

- ( ) True
- (•) False

Question 8 Correct on previous attempt(s) **2 / 2 points**

Depth-first search can be used to find the shortest path from some given vertex to every reachable vertex.

- ( ) True
- (•) False

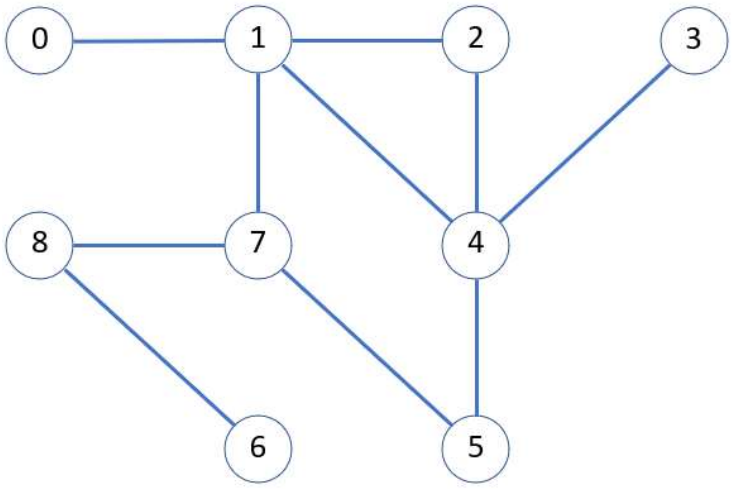
Question 9 Correct on previous attempt(s) **2 / 2 points**

Breadth-first search can be used to find the shortest path from some given vertex to every reachable vertex.

- (•) True
- ( ) False

Undirected graphs (large)

All the questions in this section refer to this (undirected) graph:



Question 10 Correct on previous attempt(s) **2 / 2 points**

How may vertices does the graph have?

Answer: 9

Question 11 Correct on previous attempt(s) **2 / 2 points**

How may edges does the graph have?

Answer: 10

Question 12 Correct on previous attempt(s) **2 / 2 points**

How many vertices have a degree of 4?

- 3
- 2
- 5
- 1

Question 13 Correct on previous attempt(s) **2 / 2 points**

This graph has at least one cycle.

- (●) True
- ( ) False

Question 14 Correct on previous attempt(s) **2 / 2 points**

How many cycles does this graph have? (This may be trickier than it looks!)

- (●) 3
- ( ) 1
- ( ) 2
- ( ) None

Question 15 Correct on previous attempt(s) **5 / 5 points**

Which of these is a possible order in which the vertices could be visited during a depth-first search starting at vertex 6? (Select all possible correct answers.)

- [ ] 6 8 7 1 5 0 2 4 3
- [ ] 6 8 7 5 1 4 0 2 3
- [x] 6 8 7 1 0 4 2 3 5
- [x] 6 8 7 5 4 3 2 1 0
- [ ] 6 8 7 1 0 5 2 4 3

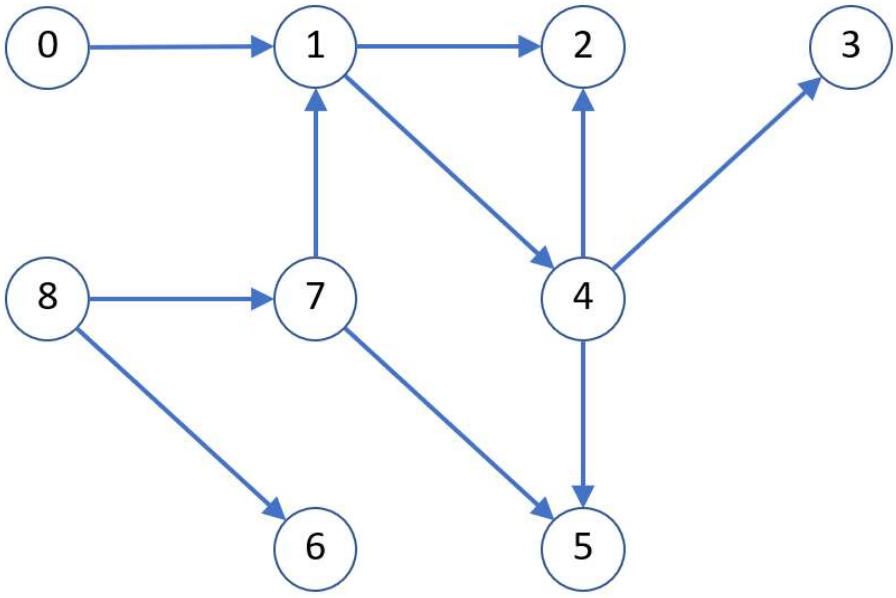
Question 16 Correct on previous attempt(s) **5 / 5 points**

Which of these is a possible order in which the vertices could be visited during a breadth-first search starting at vertex 6? (Select all possible correct answers.)

- [x] 6 8 7 5 1 4 0 2 3
- [ ] 6 8 7 5 4 3 2 1 0
- [x] 6 8 7 1 5 0 2 4 3
- [ ] 6 8 7 1 0 5 2 4 3
- [ ] 6 8 7 1 0 4 2 3 5

Directed graphs (large)

All the questions in this section refer to this directed graph:



Question 17 Correct on previous attempt(s) **2 / 2 points**

How may vertices does the graph have?

Answer: 9

Question 18 Correct on previous attempt(s) **2 / 2 points**

How may edges does the graph have?

Answer: 10

→ **Question 19** Retaken **0 / 2 points**

What is the indegree of vertex 1?

Answer: 0

→ **Question 20** Retaken **2 / 2 points**

What is the outdegree of vertex 1?

Answer: 2

Question 21 Correct on previous attempt(s) **2 / 2 points**

What is the indegree of vertex 4?

Answer: 1

→ **Question 22** Retaken **2 / 2 points**

What is the outdegree of vertex 4?

Answer: 3

Question 23 Correct on previous attempt(s) **2 / 2 points**

Which of these shows the vertices in a directed path from vertex 0 to vertex 3?

- 0 1 4 2 3
- 0 1 7 5 4 3
- 0 1 2 4 3
- 0 1 4 3 (selected)

Question 24 Correct on previous attempt(s) **2 / 2 points**

Which of these shows the vertices in a directed path from vertex 8 to vertex 3?

- 8 7 1 2 4 3
- 8 7 1 4 3 (selected)
- 8 7 4 3
- 8 7 5 4 3

→ **Question 25** Retaken **5 / 5 points**

Which of these shows the vertices in a possible topological sort order?

- [x] 0 8 7 1 6 4 2 5 3
- [ ] 0 1 8 6 7 5 4 2 3
- [x] 0 8 6 7 1 4 5 2 3
- [x] 8 7 0 1 4 3 5 2 6
- [ ] 8 0 1 2 4 3 7 5 6

Attempt Score: 59 / 61 - 96.72 %

Overall Grade (highest attempt): 59 / 61 - 96.72 %

Done