Homework #10

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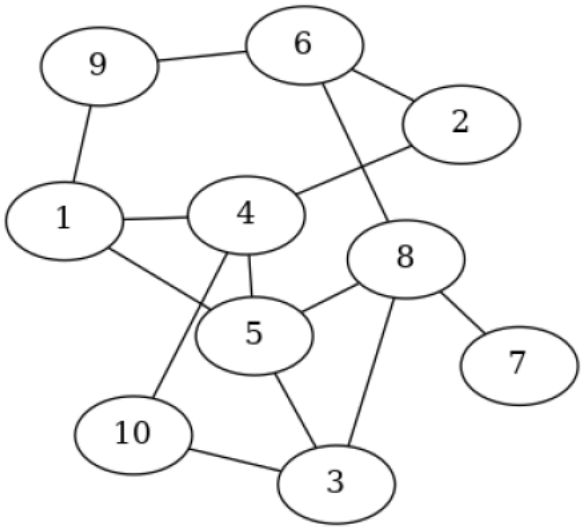
Fall 2021

For all questions, choose the **best** answer.

1.



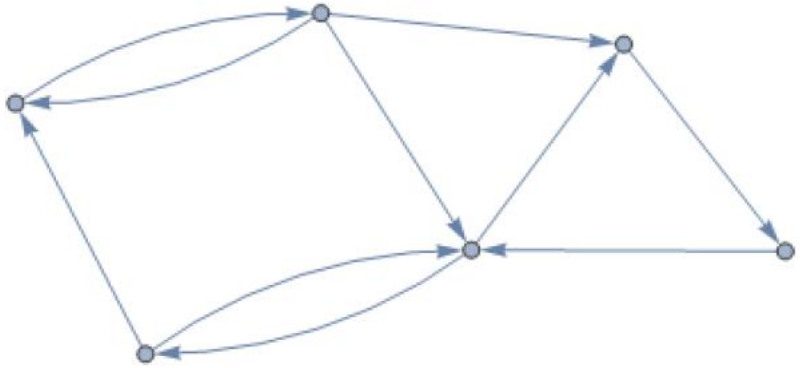
What is the minimum number of edges that need to be removed from the above graph in order to make vertex 2 an articulation point.

a. 1
b. 2
c. 3
d. 4
e. None of the above

2. How many strongly connected components are there in a nonempty directed acyclic graph G = (V, E)?
    a. 1
    b. |V| + |E|
    c. |V|
    d. |V| - 1
    e. None of the above

3.

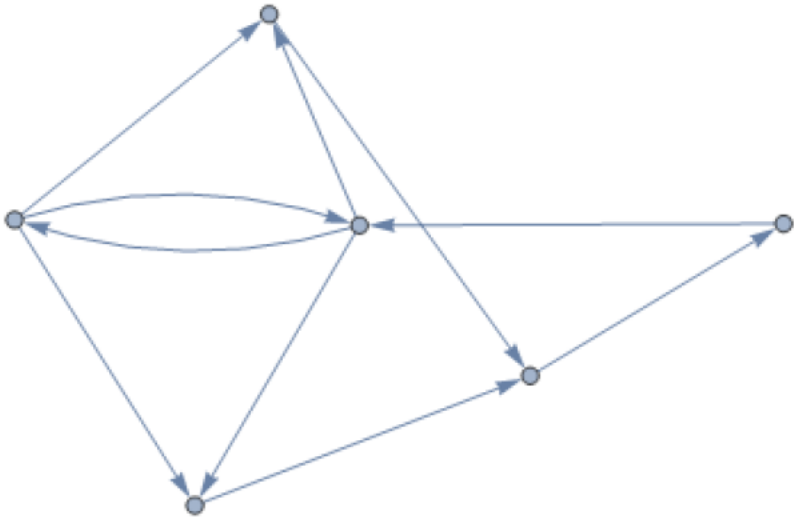
How many total edges are in the shortest postman tour of the following graph? (You may assume that all edges have length 1.)



a. 14
b. 16
c. 18
d. 20
e. None of the above

4.

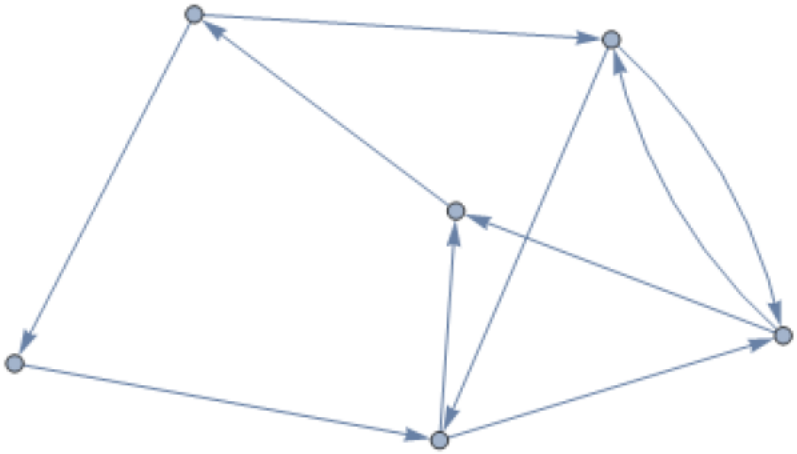
How many total edges are in the shortest postman tour of the following graph? (You may assume that all edges have length 1.)



a. 18
b. 20
c. 21
d. 22
e. None of the above

5.

How many total edges are in the shortest postman tour of the following graph? (You may assume that all edges have length 1.)



a. 11
b. 12
c. 13
d. 14
e. None of the above