

Last name	
First name	
Group	

Grade	
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Algorithmics
Undergraduate 2nd year - S3
Final Exam #3 (P3)
17 December 2019 - 9 : 30
Answer Sheets

1	
2	
3	
4	
5	

Answers 1 (Implementation and questions... – 2 points)

1. The transitive closure of G is a _____ graph:

a)

b)

2. The Depth-First Search postorder list of vertices of G :

Answers 2 (Warshall - Union-Find – 4 points)

1. Connected components (vertex sets):

C_1 : _____

C_2 : _____

... : _____

... : _____

... : _____

... : _____

2. Which vectors could correspond to the result?

	yes	no
P_1		
P_2		
P_3		
P_4		

Answers 3 (I want to be tree – 5 points)

Specifications:

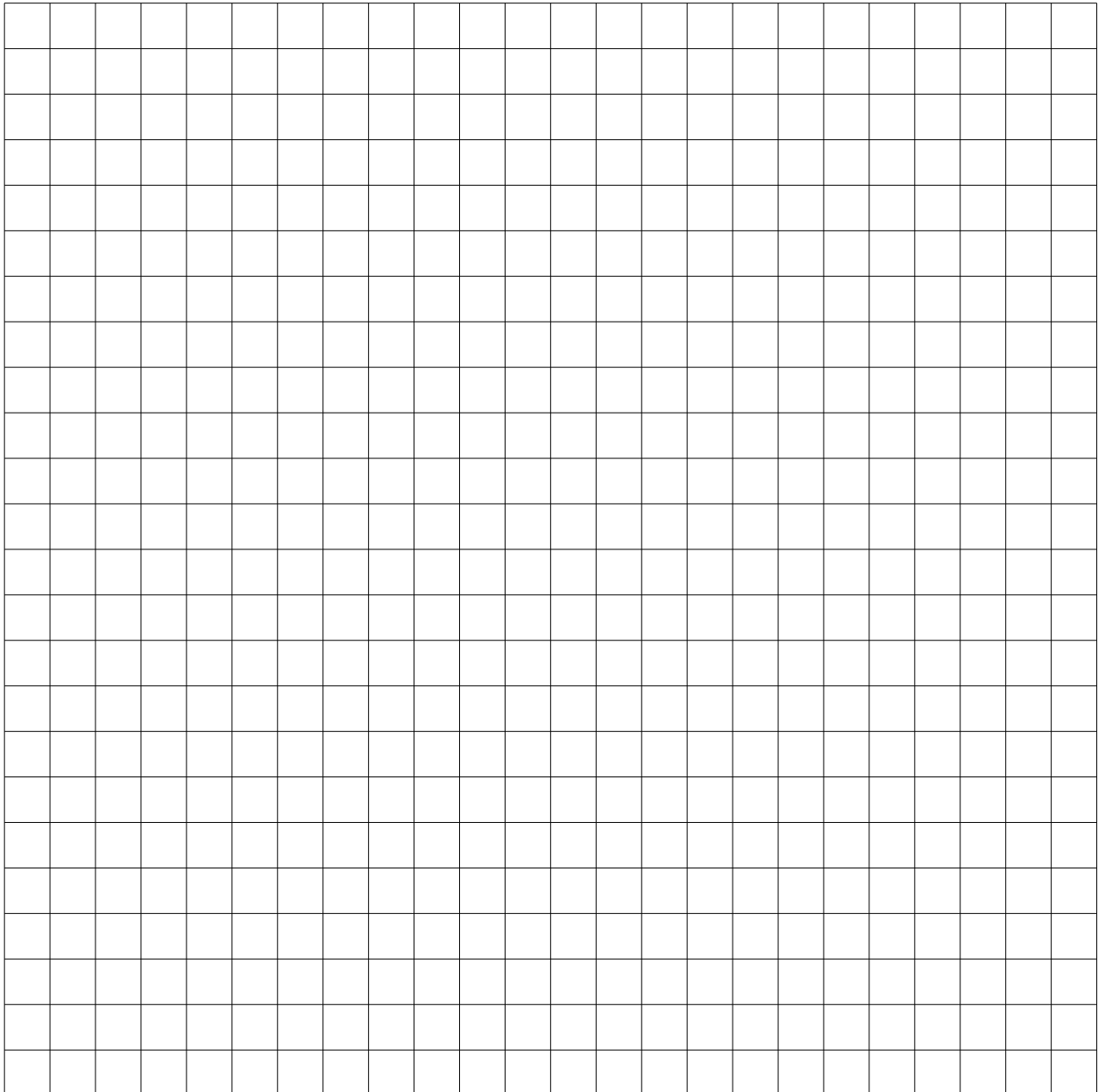
The function `isTree(G)` tests whether G is a tree.

Answers 4 (Distances and center – 6 points)

The function that answers the question is to write next page...

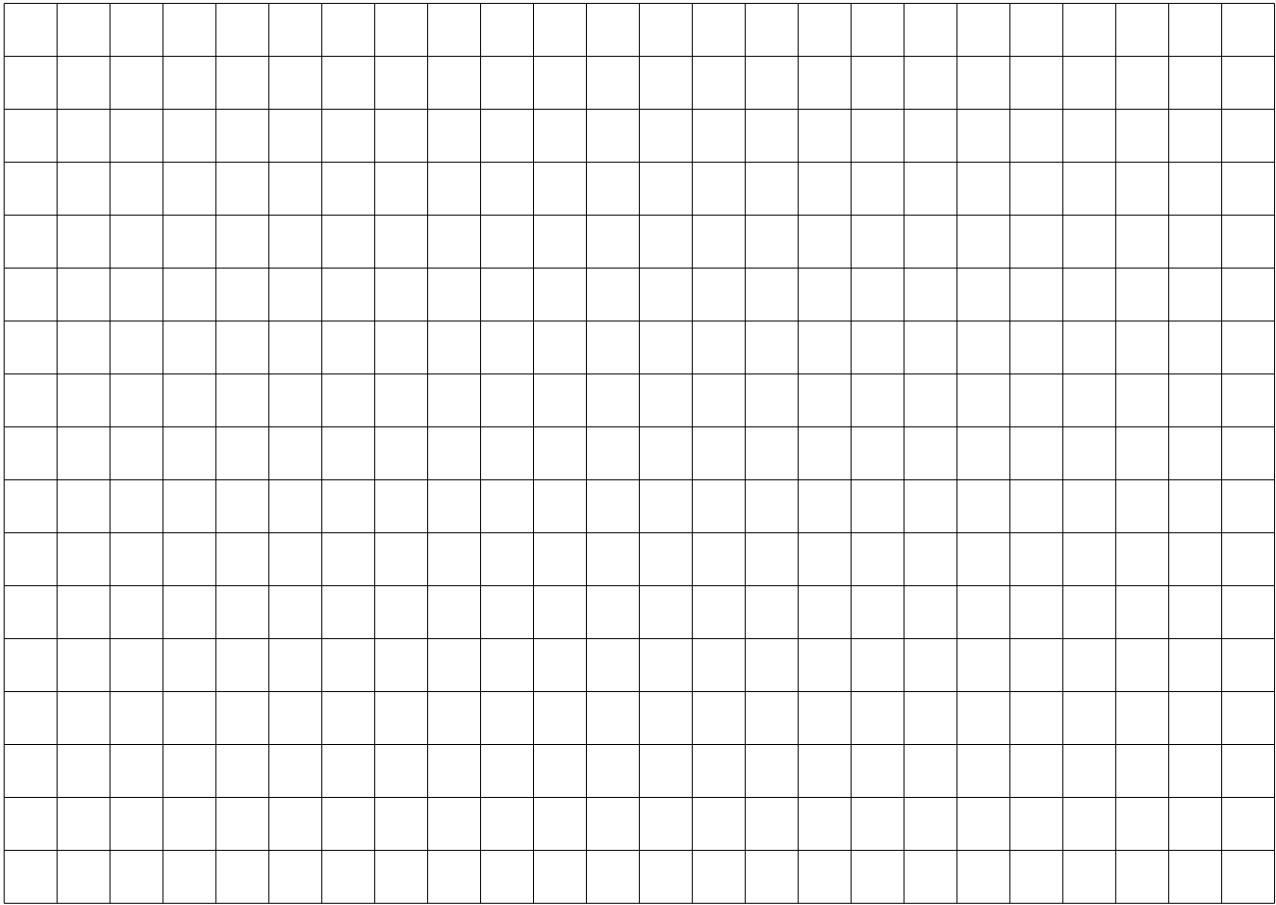
Specifications:

The function `eccentricity(G, s)` computes the eccentricity of s in G .



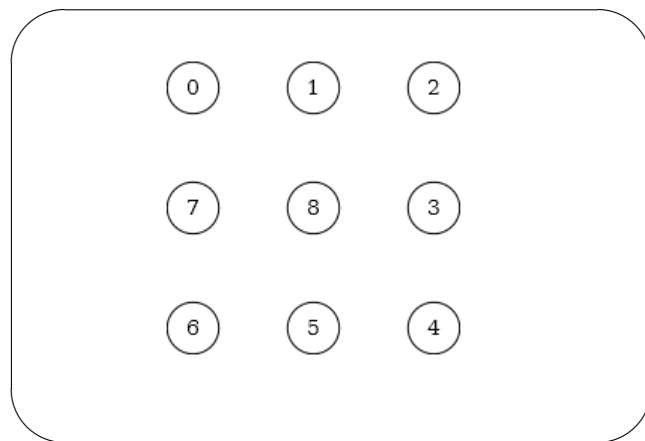
Specifications:

The function `center(G)` returns the center of the graph G .



Answers 5 (What is this? – 3 points)

1. The built graph (NG):



2. Vertices in order of encounter:

3. How many components when the initial graph has k : _____