Mathematics 3
Tree

Group Members

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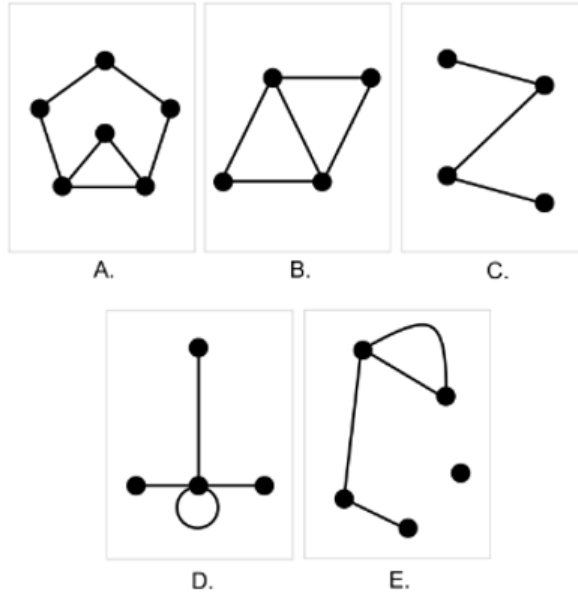Muhammad Baihaqi Aulia Asy'ari   **2241720145**

Class
2I

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Study Program
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Task 1

Which of the follwing images is a tree graph?


A.   B.   C.

D.   E.

Answer

C. because to be considered as a tree, a graph must have these properties: any pair of vertices connected to each other must not have any same relation to another vertices except for their relation to each other, the number of edges must be 1 less than the number of vertex the graph has, and the relation between vertex must be undirected and interconnected to each other. in other word a graph must not have circuits within it self, must have edges n-1 to the number of vertex and have all vertex interconnected without direction of edges to be considered as a tree graph.
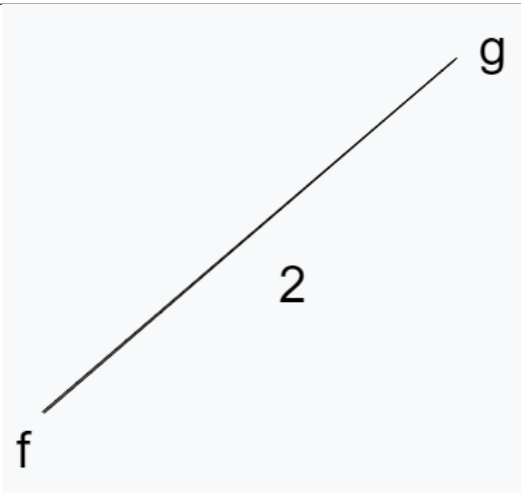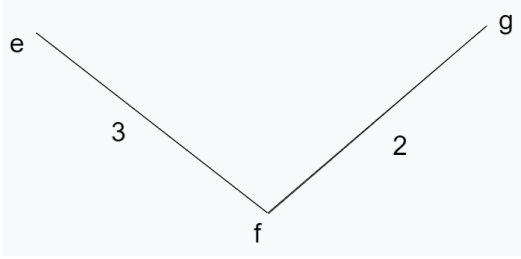
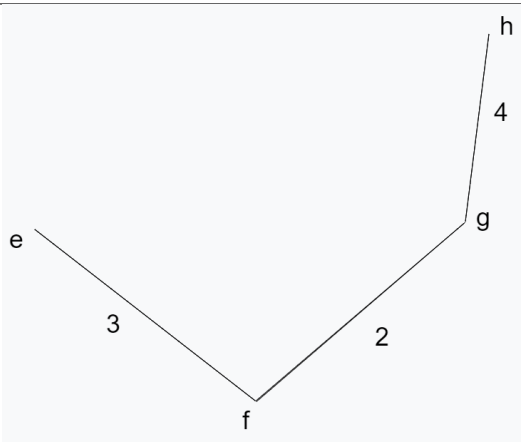# Task 2

Find the minimum spanning tree from the following image with the prim algorithm, continue the table below
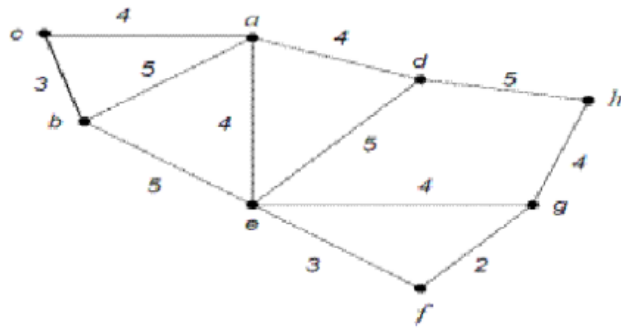
Langkah	Sisi	Bobot	Pohon merintang
1	(f,g)	2	
2	(f,e)	3	

Answer

Langkah	sisi	bobot	pohon merintang
1	(f,g)	2	
2	(f,e)	3	
3	(g,h)	4	

| 4	(e,a)	4	 a 4 h 4 e g 3 2 f
5	(a,d)	4	 a 4 d 4 h 4 e g 3 2 f
6	(a,c)	4	 c 4 a 4 d 4 h 4 e g 3 2 f

7	(c,b)	3	

Task 3

Look for 1 example of a journal application of a Tree / Decision tree and draw a picture of the tree arrangement

Answer

in the journal article titled **"Pemilihan Supplier Bahan Baku Kertas Dengan Model QCDFR dan Analytical Hierarchy Process (AHP)"**, a weighted rooted tree graph is used to measure company performance.
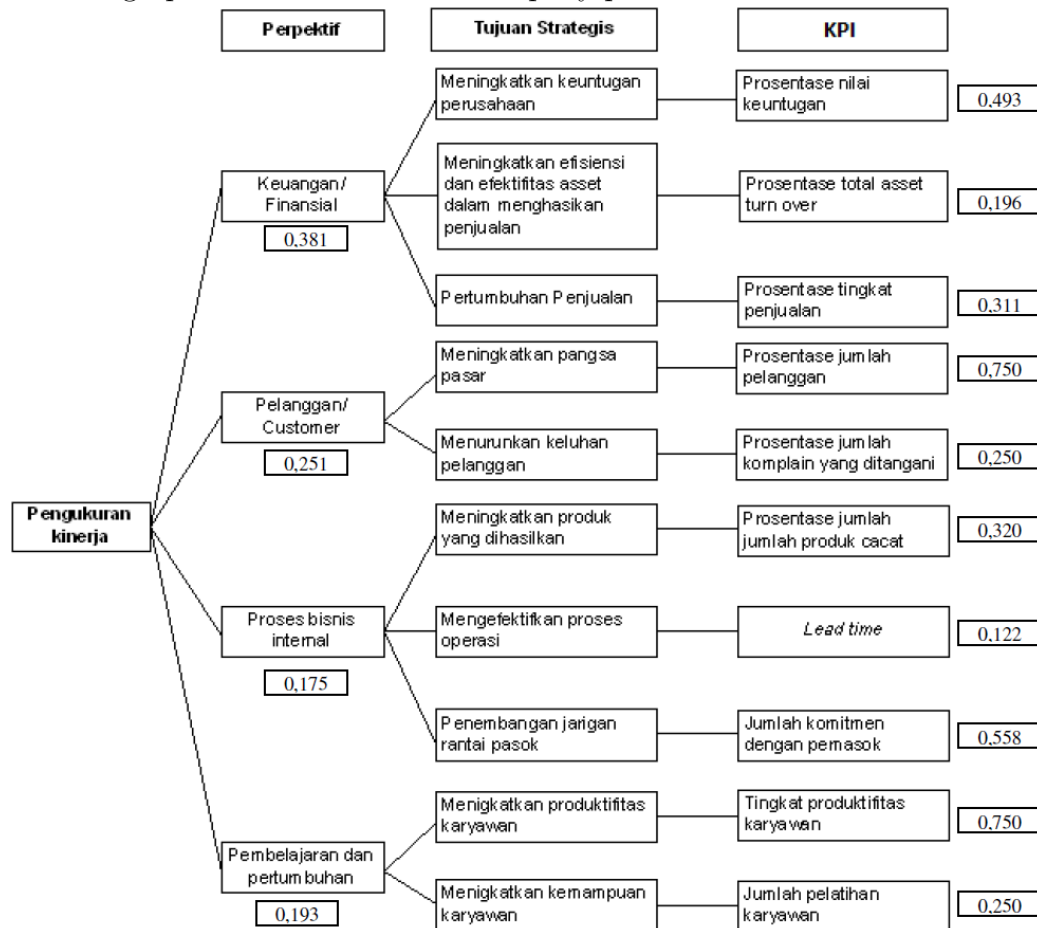
source: https://scholar.google.com/citations?view_op=view_citation&hl=id&user=RWuenBkAAAAJ&cstart=20&pagesize=80&authuser=1&citation_for_view=RWuenBkAAAAJ:UeHWp8X0CEIC