

Discovering Euler's Formula for Planar and 3D Figures

Consider the 16 planar figures.

Count the number of regions the plane has been divided into.

Count the number of vertices involved.

Count the number of edges involved.

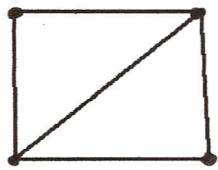
Collect the data from the picture in the chart below:

Figure	Regions	Edges	Vertices
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			
N			
O			
P			

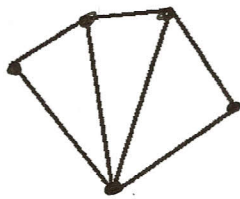
Are the number of regions, edges, and vertices related to each other?

What formula did Euler discover?

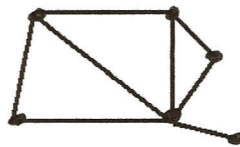
A.



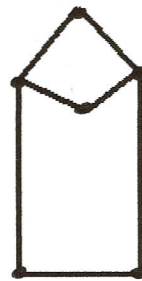
B.



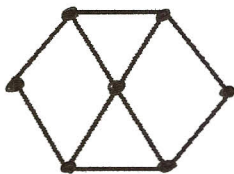
C.



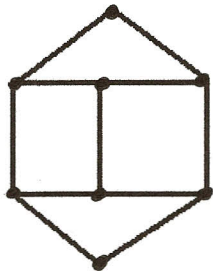
D.



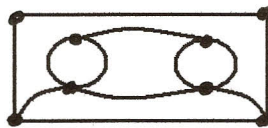
E.



F.



G.



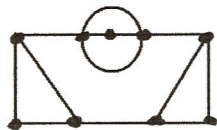
H.



I.



J.



K.



L.



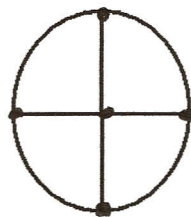
M.



N.



O.



P.

