5025211074
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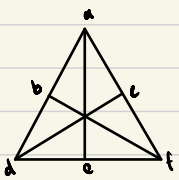
1. 20 Vertices → 3 Edges
region?
$R - E + V = 2$
$E = \frac{(3 \cdot V)}{2} = \frac{(3 \cdot 20)}{2} = 30$

$R - E + V = 2$
$R - 30 + 20 = 2$
$R - 10 = 2$
$R = 2 + 10 = 12$
in 20 Vertices with 3 edges, there's 12 region

2. A.



- Set 1 = {A, B, C}
- Set 2 = {D, E, F}

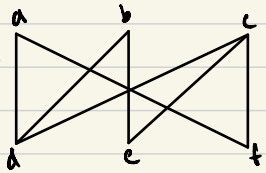
2 set with 3 vertices

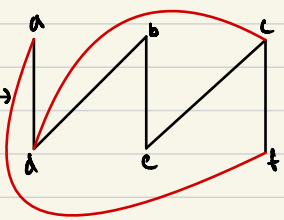
Connections
A → D, E, F
B → D, E, F
C → D, E, F

All vertices is connected

Contains Graph K3,3
So it's non-planar.

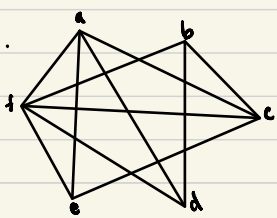
B.





Self explanatory

C.



- Set 1 = {A, B, C}
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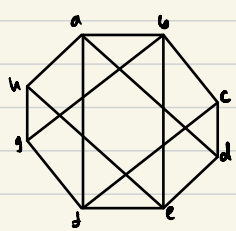
2 set with 3 vertices

Connections
· All vertices in set 1 are connected to set 2

Contains Graph K3,3
So it's non-planar.

D.



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