GRAPH THEORY PROJECT -- ANSWERS

Name: Skylar Valerio
Section: Project 2, Discrete Mathematics

Research

1. A **vertex** is a point on a graph where two edges meet. An **edge** is the line that connects two vertices.

2. Vertices are **adjacent** to each other if they are connected by an edge.

3. The **degree** of a vertex is defined by the number of neighbors it has.

4. The **total degree** of a graph is the sum of all the individual degrees of its vertices.

5. A graph is considered **regular** if every vertex has the same degree.

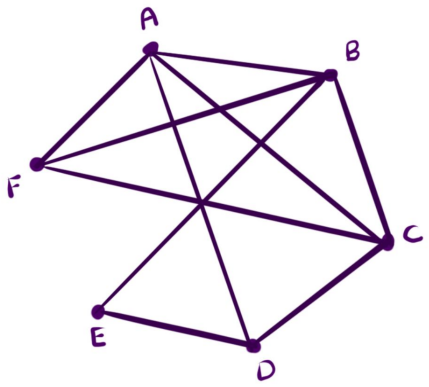
Analyze

6. There **is** a Path from A to D through every vertex
< A, C, B, E, F, D>
There **is not** a Circuit from C to C through every vertex

7. 3

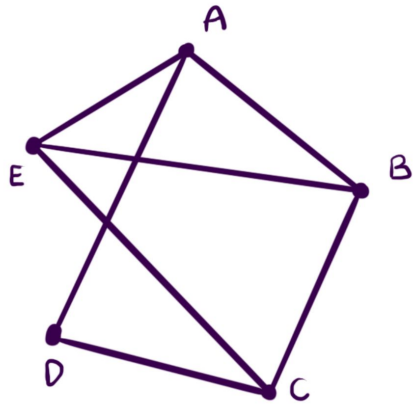
Draw and Analyze Graphs

8.



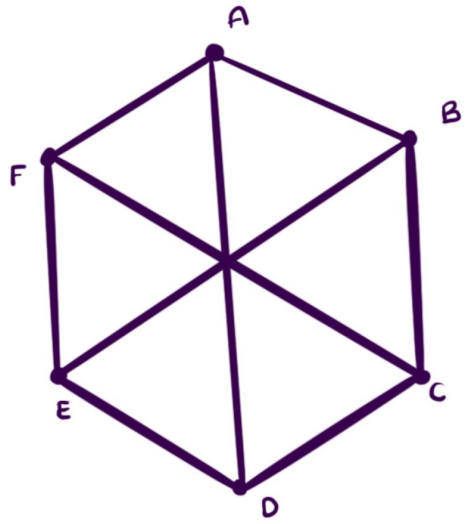
regular graph: no
total degree: 20
planar graph: no

9.



regular graph: no
total degree: 14
planar graph: yes

10.



regular graph: yes
total degree: 18
planar graph: no

Bonus