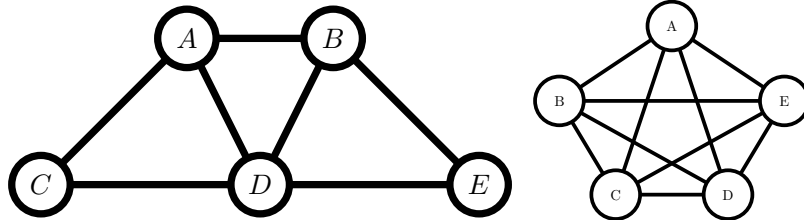


1. Write down the Vertex and Edge Sets for the following Graphs:

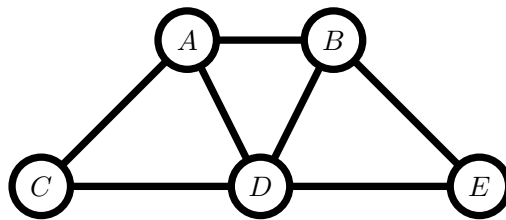


- What is the *order* and the *size* of each of the above graphs?
- Write out the *degree sequence* of each graph.
- What is *adjacency matrix* for the each of the above graphs?
- Write out the *adjacency list* of each graph.
- What is *incidence matrix* for the each of the above graphs?

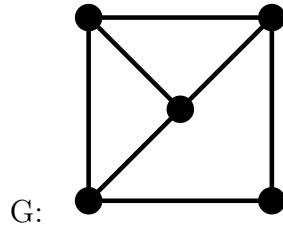
2. Represent the following information as a *Digraph*:

- Dave and Kathryn like Maths. Paul does not like Maths
- Four villages lie in close proximity to each each. Village A lies at the top of a closed valley, Village B lies at the end this valley. Village A and B are connected by an average road connection. Village C has a fast road road connection to B. Village D has good road connection to C but a small country lane connection to B. Give suitable weights to each edge of this Digraph.

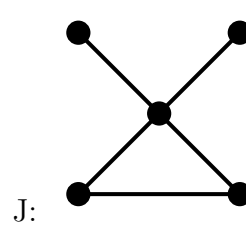
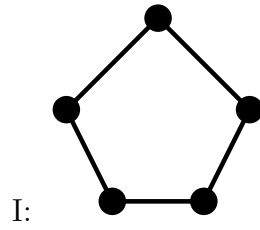
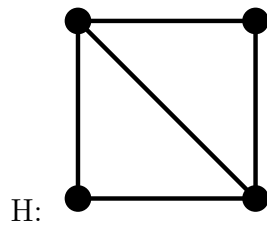
3. Write down all the subgraphs of size size 6 of the following graph:



4. Consider the graph, G below:



Which of the following subgraphs, H , I and J , respectively are subgraphs of G :



Justify your answer.