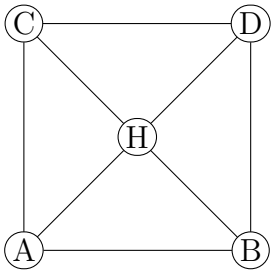
Name:_____

NetID:_____ **Lecture: A B**

Discussion: Thursday Friday 10 11 12 1 2 3 4 5 6

(9 points) How many cycle subgraphs (i.e. subgraphs isomorphic to C_n for some n) does the graph below contain? Count two cycles as the same if they have the same set of nodes; don't worry about (for example) which node is the start/end node. Briefly justify and/or show work.



(2 points) What is the diameter of the above graph?

(2 points) Does the above graph have a cut edge?

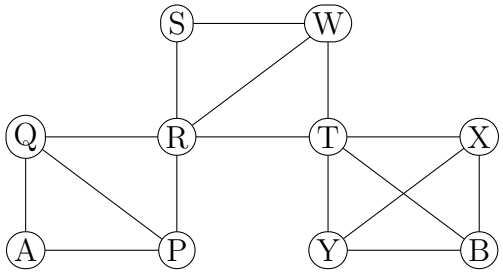
(2 points) How many connected components does the above graph have?

Name:_____

NetID:_____ **Lecture: A B**

Discussion: Thursday Friday 10 11 12 1 2 3 4 5 6

(9 points) How many paths are there from A to B in the graph below? Explain or show work.



(2 points) Does the above graph have an Euler circuit?

(2 points) Is the above graph bipartite?

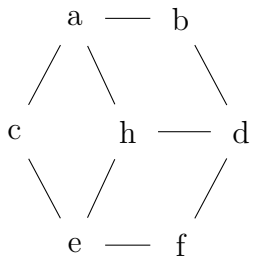
(2 points) How many connected components does the above graph have?

Name:_____

NetID:_____ **Lecture: A B**

Discussion: Thursday Friday 10 11 12 1 2 3 4 5 6

(9 points) How many paths are there from a to f in the graph below? Explain or show work.



(2 points) How many connected components does the above graph have?

(2 points) Is the above graph bipartite?

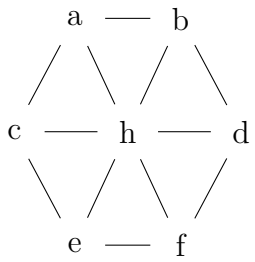
(2 points) Does the above graph contain a 6-node cycle?

Name:_____

NetID:_____ **Lecture: A B**

Discussion: Thursday Friday 10 11 12 1 2 3 4 5 6

(9 points) How many paths are there from h to d in the graph below? Explain or show work.



(2 points) Does the above graph have an Euler circuit?

(2 points) Is the above graph bipartite?

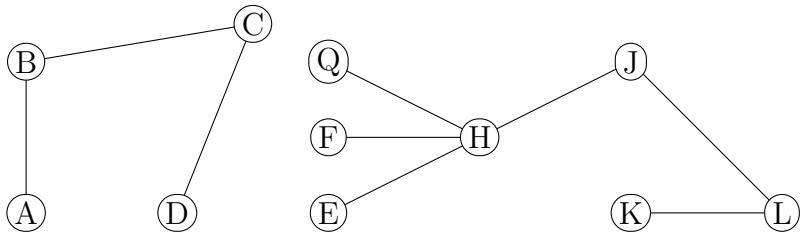
(2 points) Does the above graph contain a 6-node cycle?

Name:_____

NetID:_____ **Lecture: A B**

Discussion: Thursday Friday 10 11 12 1 2 3 4 5 6

(9 points) How many paths are there (with any starting/ending points) in the graph below? Explain or show work.



(2 points) Is the above graph acyclic?

(2 points) How many connected components does the above graph have?

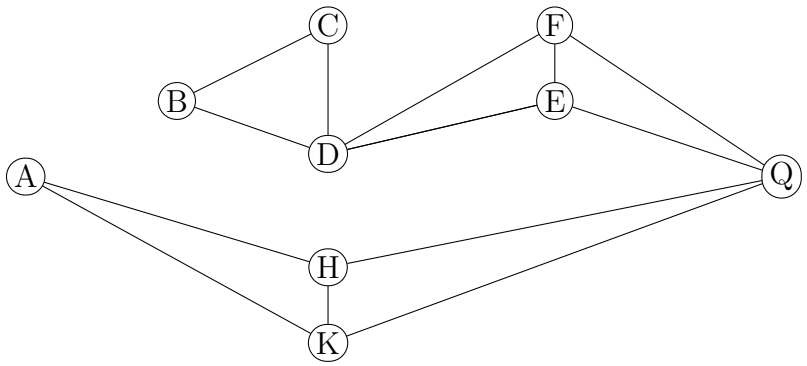
(2 points) Does the above graph have a cut edge?

Name:_____

NetID:_____ **Lecture: A B**

Discussion: Thursday Friday 10 11 12 1 2 3 4 5 6

(9 points) How many paths are there from A to B in the graph below? Explain or show work.



(2 points) How many connected components does the above graph have?

(2 points) Is the above graph acyclic?

(2 points) Does the above graph have an Euler circuit?