

Name: _____

Circle The Hour: 3rd /4th /8th

Wholeness: Vertex-edge graphs consists of vertices (nodes i.e. dots) and edges (lines or arches) that allow us to represent and solve real-life problems graphically.

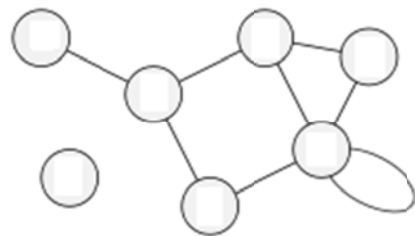
Main Points

Put checkmark next to all main points you understand. You are graded for being honest with your answer. Do not check unless you understand what the point means. Ask or Google it until you understand.

1. Vertex is a point or a node where lines can meet.
2. Degree of a vertex equals to number of lines meeting at the vertex.
3. Edge is a line that connects two vertices.
4. Walk is a path traveled using edges and vertices.
5. If edges have a direction, we call it a digraph.
6. Graph means a set of finite number of vertices connected by edges.
7. Graphs, consisting of vertices and edges can represent real-life situations and problems, helping us solve problems.
8. If the graph starts and ends in the same vertex, it's called a circuit or cycle.
9. If each edge is visited only once, it's an Euler path or cycle.
10. If each vertex is visited only once, it's a Hamiltonian path or cycle.
11. You need to UNDERSTAND the above. Do not just hand in homework for the sake of homework.

Exercises

1. Draw a graph with two vertices and 1 edge.
2. Draw a graph with 5 vertices and 6 arcs (edges).
3. Draw a directed graph (digraph) with 3 vertices and at least 2 edges



4. Label vertices by the # of degrees they each have →
5. Draw your most favorite vertex-edge graph and label the vertices as you please. Use other side. Determine whether it's a a) circuit, b) hamiltonian or euler path/circuit

This is your homework. Return to Mr. T latest on Wednesday morning. Review tomorrow's lesson online:

<http://theprofessort.com/vertex-edge-2/>