

Graph Theory in Drama Summative Assessment

Answer the following writing prompts.

1. Explain node, child node, sibling node and edge as related to graph theory.

A node or vertex is a point on the graph. In a social network or dramatic work represented by a graph, it is a person. An edge is a line connecting two nodes representing a connection or relationship. Child nodes are the nodes that are directly connected to a given node and sibling nodes are nodes in the graph that are not directly connected.

2. Describe how engineers use graph theory.

Graph theory can be used to represent relationships present in a system. Many different types of engineering use graph theory. Computer engineers use graphs to represent networks and integrated circuits. Structural engineers use graph theory to represent the dynamics present in structural members like trusses.

3. Explain how you can apply a mathematical concept like graph theory to literature and what you can learn from that application.

The concept of graph theory can be used to show character relationships in a visual way. From the activity on dramatic networks, characters with more connections can be represented with larger nodes and others with fewer connections by smaller nodes. This representation easily helps viewers see who is important in the story and the relationships that exist.