Graph theory:

1)included mazes, navigation, network, pathfinding problems

Graph G(V,E)

V=finite set with vertices

E=set of edges (pair of vertices) representing the connections between nodes.

Types of graphs :  
1)undirected graph: the edges between nodes have no direction e.g if you can move from A to B you can also move B to A

2)directed graph: edges have direction which means if you can go A from B doesn’t mean you can go B to A

a) vertices represent distinct points

b) edges connect pair of vertices and represent possible movement between the

c) graph traversal: Graph traversal refers to the process of visiting all the nodes in a graph in a systematic manner.

d) connectedness: A graph is **connected** if there is a path between every pair of vertices. In the context of a maze, if the maze is fully connected, then it is possible to reach every cell from any starting cell.

e)sequence : A **path he** in a graph is a sequence of edges that connect a sequence of distinct vertices.