# Example Context Elaboration: Traversability
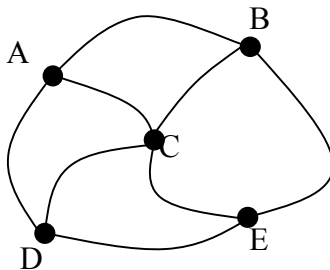
Focus: Networks

## Achievement objective M7-5

*In a range of meaningful contexts, students will be engaged in thinking mathematically and statistically. They will solve problems and model situations that require them to:*
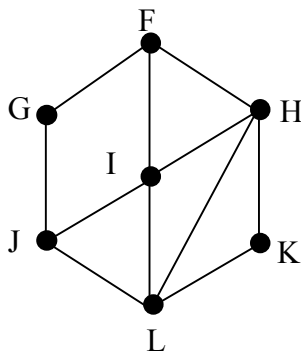
Choose appropriate networks to find optimal solutions

## Traversability

Below are several networks representing the streets of some of the different areas that delivery trucks must travel. For each network state if it is traversable or not. Justify your answer by giving a suitable reason. If it is traversable give a valid path as well.
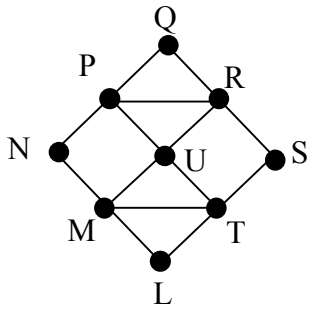


*Not traversable as it has more than 2 odd nodes*



*Traversable as it has only 2 odd nodes, however they cannot return to the point where they started.*

$$F \rightarrow H \rightarrow K \rightarrow L \rightarrow J \rightarrow G \rightarrow F \rightarrow I \rightarrow H \rightarrow L \rightarrow I \rightarrow J$$

Traversable and can return to the point where they started as there are no odd nodes.

$$Q \Rightarrow P \Rightarrow N \Rightarrow M \Rightarrow L \Rightarrow T \Rightarrow U \Rightarrow R \Rightarrow S \Rightarrow T \Rightarrow U \Rightarrow P \Rightarrow Q$$