Example Context Elaboration: Shortest Path

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

Moisha's journey

Moisha, who lives in A, is planning a trip to visit her grandma in F. The map below shows the various routes she could take, along with the distances between the towns along the way (D, B, C, & E). Moisha has a limited supply of cash for petrol, so she wishes to minimise the distance she travels in her journey.

State the shortest path, and its distance, for Moisha to travel from A to F. Show all working.

The shortest path is A → B → C → E → F, which is 155 km.