

Unit 2: Graphs and Graph Theory

2.08 Weighted Edges and Graphs that Include Them

A **NETWORK** is a graph in which **every** edge is assigned a weight.

The **weight of a path** is found by adding up the weights of each edge you walk along on that path.

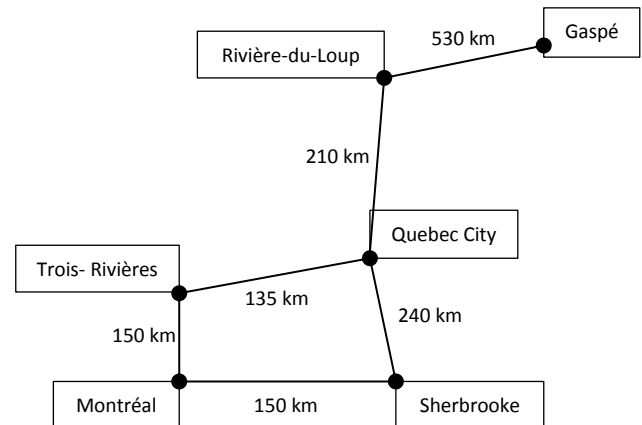
A **NETWORK** can be directed or undirected.

Ex: Railroad Transportation Costs

The network on the right shows the distance between towns linked by a railroad network.

Transporting heavy equipment by train costs about \$100 per 100km.

Give the approximate cost of transporting heavy equipment from Gaspé to Montréal.



Options

G-R-Q-T-M = 1025 km <= shortest

G-R-Q-S-M = 1130 km

$1025 * \$100 = \$102,500$ to transport from Gaspé to Montréal.