



# Weighted Graphs

## 1 Why

Often the edges of some graph are associated with a particular cost, perhaps the cost of traversing that edge.

## 2 Definition

A weighted graph is an ordered pair: its first coordinate is a graph and its second coordinate is a function from the edge set of the graph to the real numbers. We call the function the *weight function* and call the result of the function on the edge the *weight* of an edge.