$$\diamondplus$$

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.

Weighted Graphs

Graphs   Real Numbers

                          Rational Numbers

Unordered Pairs   Integer Numbers

                              Zero

                          Natural Numbers   Equati

Set Intersections   Set Unions   Empty Set

                    2   Set Specification

                                              Set Inclusion