



Minimum Spanning Trees

Learning Objectives

1. Know the runtime of Kruskal's Algorithm



Priority Queue:	Heap	Sorted Array
Building :6-8		
Each removeMin :12		
Total		

```

1  KruskalMST(G):
2      DisjointSets forest
3      foreach (Vertex v : G):
4          forest.makeSet(v)
5
6      PriorityQueue Q // min edge weight
7      foreach (Edge e : G):
8          Q.insert(e)
9
10     Graph MST = (V, {})
11     while |MST.edges()| < n-1:
12         Vertex (u, v) = Q.removeMin()
13         if forest.find(u) != forest.find(v):
14             MST.addEdge(u, v)
15             forest.union( forest.find(u),
16                           forest.find(v) )
17
17     return MST

```