

# Suppose I have a new heap:

	Binary Heap	Fibonacci Heap
Remove Min	$O(\lg(n))$	$O(\lg(n))$
Decrease Key	$O(\lg(n))$	$O(1)^*$

## What's the updated running time?

```
PrimMST(G, s):
6   foreach (Vertex v : G):
7       d[v] = +inf
8       p[v] = NULL
9   d[s] = 0
10
11  PriorityQueue Q // min distance, defined by d[v]
12  Q.buildHeap(G.vertices())
13  Graph T          // "labeled set"
14
15  repeat n times:
16      Vertex m = Q.removeMin()
17      T.add(m)
18      foreach (Vertex v : neighbors of m not in T):
19          if cost(v, m) < d[v]:
20              d[v] = cost(v, m)
21              p[v] = m
```