Implementing Remove

```
int remove()    // class method
{
   int v = a[1];
   a[1] = a[N--];
   downheap(1);
   return v;
}

void downheap(int k)  // class method
{
   int j, v;
   v = a[k];
   while (k <= N/2)
   {
      j = k+k;
      if (j < N && a[j] < a[j+1])  j++;
      if (v >= a[j])  break;
     a[k] = a[j];  k = j;
   }
a[k] = v;
}
```

Implementing Insert

```
void insert(int v)    // class method
{
   a[++N] = v;
   upheap(N);
}

void upheap(int k)  // class method
{
   int v;
   v = a[k];  a[0] = intMax;   //intMax is a sentinel
   while (a[k/2] <= v)
   {
      a[k] = a[k/2];
      k = k/2;
   }
a[k] = v;
}
```