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**Algorithm** Find the minimum cost to connect  $n$  ropes

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1: function CONNECT_ROPES( $Arr$ )
2:   for  $i = 1 : N$  do
3:      $min\_heap.push(a[i])$ 
4:    $cost \leftarrow 0$ 
5:   while  $min\_heap.size > 1$  do
6:      $min\_element \leftarrow min\_heap.top, min\_heap.pop$ 
7:      $second\_min\_element \leftarrow min\_heap.top, min\_heap.pop$ 
8:      $cost += min\_element + second\_element$ 
9:      $min\_heap.push(min\_element + second\_element)$ 
```

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