**Algorithms, Fibonacci Heaps - Thursday, March 11, 2021**

Draw the resulting Fibonacci Heap after the Decrease-Key operation is performed to reduce the key 9 to 6. The blue nodes (5 and 8) have already been marked as losers. Note, this will take several steps, and you can use the space around the code to work out your intermediate steps.

![Initial Fibonacci Heap](image1)

**FUNCTION** `FibPQDecreaseKey(pq, value, newKey)`

```python
node = pq.lookupTable[value]
node.key = newKey
parent = node.parent

IF parent != NONE && node.key < parent.key
  LOOP
    parent.children.remove(node)
    pq.heaps.append(node)
    IF node.key < pq.minNode.key THEN pq.minNode = node
    node.isLoser = FALSE
  BREAK IF parent == NONE || parent.isLoser == FALSE
  node = parent

IF parent != NONE
  parent.isLoser = TRUE
```