**MEMORY USAGE PERCOLATION**

**PERCOLATION QUICK FIND:**

Quick Find – 2 arrays + 4 ints(in union)

  = 56+8(n2+1) + 56+8(n2+2) +4(28)+32

 = 256+ 8(n2+1) + 8(n2+2)

 = 280 + 16(n2) bytes

Percolation –

* Init: 2 ref to qf + 4 ints (size, openCount, Vtop and Vbottom) + list of booleans = 2(8) + 4(28) + 56 + 8(n2) = 184 + 8n2 bytes
* Open: 7 ints (top, bot, left, right, idx, rowidx, colidx) 7(28) = 196 bytes
* is\_open: 3 ints 3(28) = 84 bytes
* is\_full: 3 ints 3(28) = 84 bytes
* animate: 1 int -> 28 bytes
* total perc: 576 + 8n2 bytes

TOTAL = 280 + 16n2 + 576 + 8n2 = 856 + 24n2 bytes ~24n2

**PERCOLATION WQU:**

Weighted quick Union – 4 arrays + 4 ints(in union)

  = 56+8(n2+1) +56+8(n2+1) + 56+8(n2+2) +56+8(n2+2) +4(28)

 = 336 + 16n2 +16 + 16n2 +32.

 = 384 + 32n2 bytes

Percolation –

* Init: 2 ref to wqu + 4 ints (size, openCount, Vtop and Vbottom) + list of booleans= 2(8) + 4(28) + 56 + 8n2 = 184 + 8n2 bytes
* open: 7 ints (top, bot, left, right, idx, rowidx, colidx) 7(28) = 196 bytes
* is\_open: 3 ints 3(28) =84 bytes
* is\_full: 3 ints 3(28) = 84 bytes
* animate: 1 int -> 28 bytes
* total perc: 576 + 8n2 bytes

TOTAL = 384 + 32n2 + 576 + 8n2 = 960 + 40n2 bytes ~40n2