DS 5110 Dynamo Consistent Hashing

Token map:
token(n1) = {-2, 4}   token(n2) = {-7, 0}   token(n3) = {-5, 2, 6}

Q1. How many nodes are there? How many *vnodes*?

3 nodes and 7 vnodes

Q2. Which node likely has greater resources (memory, storage, etc.)?

Likely n3, as n3 is configured with 3 vnodes.

Q3. One of the vnode positions of n3 is drawn in the ring below. Draw the rest.

```
    n2        n3              n1       n2      n3      n1      n3
-8|  -7|  -6|  -5|  -4|  -3|  -2|  -1|  0|  1|  2|  3|  4|  5|  6|  7|  8
```

Q4. What node is responsible for each of the following tokens?

-4: ____n1_____   1: ____n3_____   7: ____n2_____

Q5. A row's key is ("A"). Assume token("A") = -1, which node owns this row?

n2