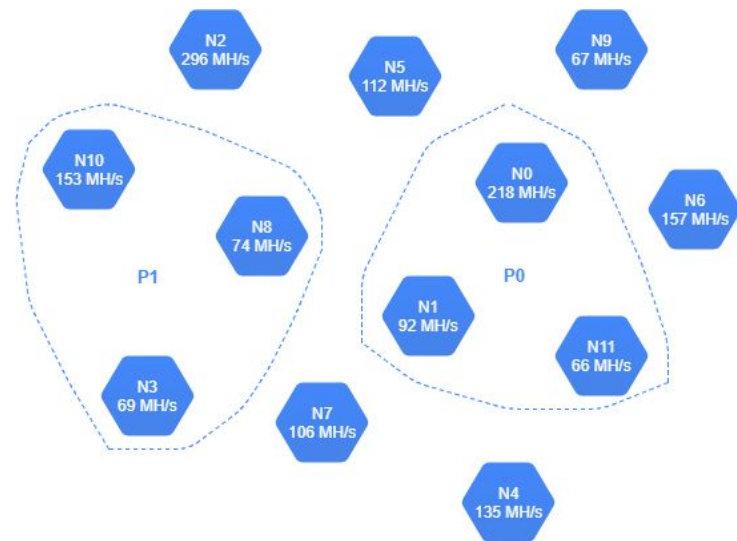


Level 2 - Hashing percentage

Task

- Calculate the percentage share of each pool and of each individual node relative to the overall hashrate of the network
- First output the pools with their hashrate. The pool-ID has to be in ascending order (see Example slide).
- Then output the individual nodes with their hashrate. The node-ID has to be in ascending order (see Example slide).



Info

Rounding

- The percentage share of the nodes and pools has to be rounded to 2 decimals in the output
 - 10.345 -> 10.35
 - 10.344 -> 10.34

Output format

- The decimal separator has to be “.”
 - Example: 10.35

Data format

Input

`<NumberOfNodes>` the number of nodes the network consists of

NumberOfNodes lines: `<NodeId> <HashRate>`

`<NumberOfPools>` the number of pools in the network

NumberOfPools lines: `<PoolId> <NodeIDs space separated>`

Output

`<NumberOfPools <Pool> space separated> <NumberOfNodes <Node> space separated>`

Pool: `<PoolId> <PercentagePortionOverallHashrate>`

Node: `<NodeId> <PercentagePortionOverallHashrate>`

Example (see level2-eg.txt)

Input

```
12
N0 218
N1 92
N2 296
N3 69
N4 135
N5 112
N6 157
N7 106
N8 74
N9 67
N10 153
N11 66
2
P0 N0 N11 N1
P1 N8 N3 N10
```

Output

```
P0 24.34 P1 19.16 N0 14.11 N1 5.95 N2
19.16 N3 4.47 N4 8.74 N5 7.25 N6 10.16
N7 6.86 N8 4.79 N9 4.34 N10 9.90 N11
4.27
```

