CCO '03 P2 - Concentration Cards

Time limit: 1.0s **Memory limit:** 16M

Canadian Computing Competition: 2003 Stage 2, Day 1, Problem 2

Stan has a deck of N Concentration Cards. He wants to lay the cards edge-to-edge to form a filled rectangle with minimal perimeter. Each card is a rectangle with dimensions W mm by H mm.

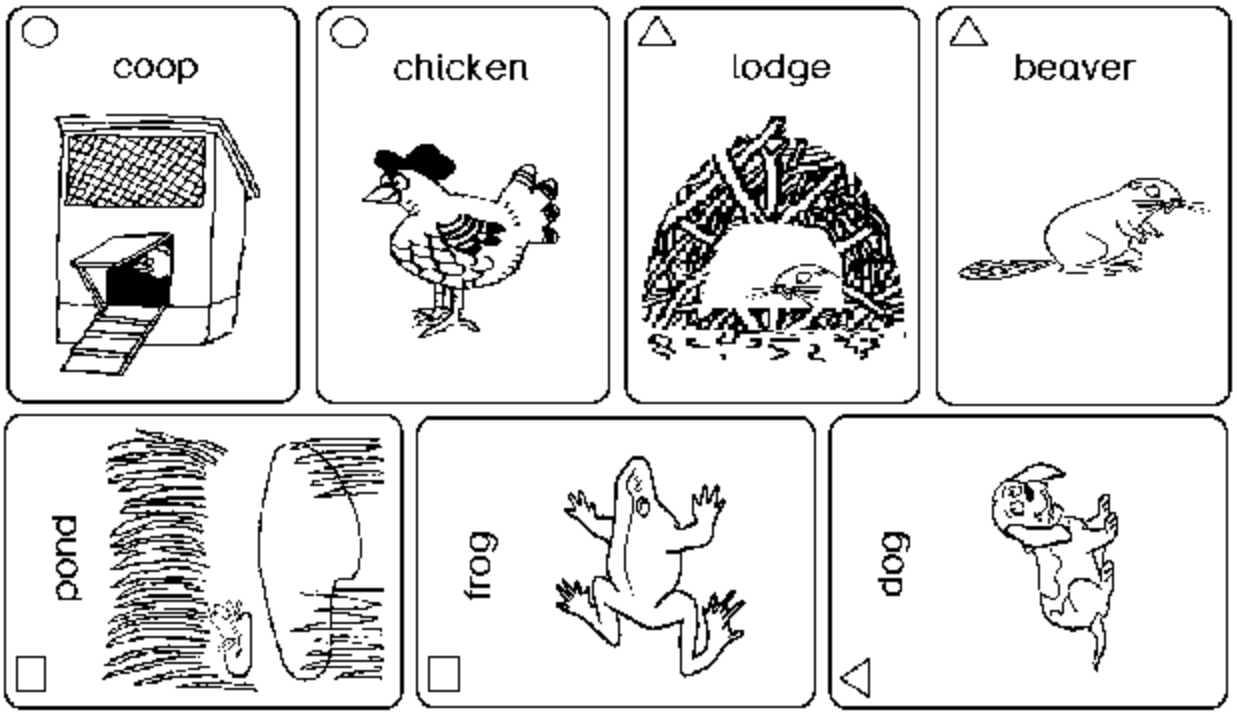

Figure 1: Concentration Cards

Input Specification

The first line of input contains C, the number of test cases. For each case there is an additional line containing N, W, H, each a positive integer not exceeding 1000.

Output Specification

Your program should produce one line of output per case, giving the minimal perimeter.

Sample Input

```
3
3 300 400
4 400 300
7 300 400
```

Sample Output

```
2600
2800
3800
```