

# ECOO Round 3 QUESTIONS

May 9, 2015

## Problem 4: Under the Rug

### Marking Procedure

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Input file names:     DATA41.txt for the first try  
                          DATA42.txt for the second try

**\*\*\* ALLOW 60 SECONDS OF COMPUTING TIME \*\*\***

**Bring the data file (solution.txt) on your USB key to the judging table to have it scored.**

**When scoring is over, you may show the target values on the next two pages to the team so they can copy them down.**

The scoring method is as follows:

#### VALID SOLUTION

- 5 points for a valid solution (entire paint area covered, no unpainted area covered).

#### SIZE (only for valid solutions)

- 5 points if their solution is the same size or smaller than the target
- Otherwise define  $d = \text{floor}(\text{target} / 10)$ . Then 4 points for being within  $d$  of the target, 3 points for being within  $2d$ , 2 points for being within  $3d$ , and one point for being within  $4d$ .

#### BONUS (first try only)

- 10 extra points if they get a perfect score on all test cases.

If the file is corrupted or the format of the file is not valid, they might get some points or they might get nothing. It depends on the nature of the error and where it occurs in the file.

#### EXAMPLES

- Solution is valid with a size of 47. Target is 48.
  - o 10 Points.
- Solution is valid with a size of 135. Target is 112.
  - o 7 points.
- Solution is valid with a size of 181. Target is 165.
  - o 9 points.
- Solution is not valid.
  - o 0 points.

# **ECOO Round 3 QUESTIONS**

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## **Problem 4: Under the Rug**

**FIRST TRY**

Solutions

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### **TARGET VALUES**

1

48

111

165

203

260

322

343

393

460

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## **Problem 4: Under the Rug**

### **SECOND TRY**

Solutions

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### **TARGET VALUES**

3

65

118

166

208

249

278

374

403

413