

## SI@UCF Introduction to Competitive Programming

### Homework 11: Use of USACO

Each of the following USACO problems can be solved using techniques taught in the course plus observational logic. Please try to solve at least two of the following problems:

Problem	Link
Herdle (Jan 22)	<a href="https://usaco.org/index.php?page=viewproblem2&amp;cpid=1179">https://usaco.org/index.php?page=viewproblem2&amp;cpid=1179</a>
Cow College (Dec 22)	<a href="https://usaco.org/index.php?page=viewproblem2&amp;cpid=1251">https://usaco.org/index.php?page=viewproblem2&amp;cpid=1251</a>
Pal Game (Feb 24)	<a href="https://usaco.org/index.php?page=viewproblem2&amp;cpid=1395">https://usaco.org/index.php?page=viewproblem2&amp;cpid=1395</a>
Majority Opinion (Jan 24)	<a href="https://usaco.org/index.php?page=viewproblem2&amp;cpid=1371">https://usaco.org/index.php?page=viewproblem2&amp;cpid=1371</a>
Moo Operations (Jan 23)	<a href="https://usaco.org/index.php?page=viewproblem2&amp;cpid=1277">https://usaco.org/index.php?page=viewproblem2&amp;cpid=1277</a>
Blocks (Feb 22)	<a href="https://usaco.org/index.php?page=viewproblem2&amp;cpid=1205">https://usaco.org/index.php?page=viewproblem2&amp;cpid=1205</a>

Note: We've provided several possibilities for you to try because USACO problems tend to be challenging and often require creative observations to solve. Depending on who you are, certain observations may come more easily than others (so two different students who are otherwise comparable might find different problems on this list easier, so to speak). Thus, I am hoping by providing lots of options, each of you can find two problems that you can solve.

In addition to your solution files, please submit a separate file (a docx is file) where for each program you state the number of submissions you needed to get it correct.

For each program where you needed more than one submission, for each extra submission, explain what you fixed compared to the previous submission.

#### **Deliverables**

1. Your source files for each of your solutions.
2. A screenshot(s) (.jpg or suitable format) of your program's performance on all the test cases in USACO. The goal is to get all the test cases right for a problem! But, still submit even if you only got some of the test cases correct.
3. A separate doc(x) file where you state the number of submissions you needed to get each program accepted, and for each program that required more than one submission, what you fixed on each incorrect submission before resubmitting.

#### **Grading Details**

80% will solely be based on correctness.

10% will be based on your programming style.

10% will be based on the document you submit.