YGP #2

The Egg Dilemma

A farmer was taking her eggs to market in her cart, and she hit a pothole, which knocked over all the containers of eggs. Though she herself was unhurt, every egg was broken. So she went to her insurance agent, who asked how many eggs she had. She said that she did not know, but remembered some things from the various ways she tried packing the eggs.

She knows when she put the eggs in groups of three, there was one egg left over. When she put them in groups of four, there was also one egg left over. When she put them in groups of five, there were two eggs left over and when she put them in groups of six, there was one egg left over. But when she put them in groups of seven, she ended up with complete groups of seven with no eggs left over.

Your task is to answer the questions: What can the farmer and insurance agent figure out from this information about how many eggs the farmer had? Is there more than one possibility? Carefully explain.

Upload your Mathematica notebook and pdf to Canvas by 4:45 pm Tuesday December 4, 2018

filename: z_eggdilemma_2018.2019_lastname

YGP - Write-Up Standard

For the **You Got Problems** write-ups you are expected to address each of your categories listed below, unless otherwise directed. The write-up must be done in Mathematica, with each of the categories clearly delineated.

- **Problem Statement:** State the problem clearly in your own words. Your problem statement should be clear enough so that someone unfamiliar with the problem could understand what it is that you are being asked to do. Wherever possible, state the problem in mathematical terms.

- **Process:** Describe what approaches you took in your attempt to solve the problem, using you notes as a reminder (notes, etc., should be included with the write-up, if appropriate – they do not need to be word processed). Include approaches that did not work with an attempt to explain why you believe they did not help to solve the problem as well as approaches that did work and why you believe they were successful.

- **Solution:** State your solution as clearly as you can. Explain how you know that your solution is correct and complete. Your explanation should be written so that it is convincing to someone else – even someone who initially disagrees with your answer.

- **Extensions:** Invent some extensions or variations to the problem. That is, write down some related problems. They can be easier, harder, or about the same level of difficulty as the original problem.

- **Self-assessment:** Assess your work on the YGP. Explain as clearly as you can what you believe you learned from doing the work and how diligently you worked on the problem. If you got assistance of any kind on the problem, you should indicate what the assistance was and how it helped you.

You Got Problems Rubric **Name _____**

Score _____ / 15

Problem Statement

0	1	2	3
No Attempt	Needs Improvement	Reader can understand the question	Clear, concise, and in proper mathematical language
Comment:			

Process

0	1	2	3
No Attempt	Needs Improvement- process not fully or clearly explained	Explores and clearly explains a method of solution	Explores and clearly explains more than one approach to the problem
Comment:			

Solution

0	1	2	3
No Attempt	Needs Improvement – solution does not follow from the work or is not correct	Solution is correct, but not fully supported by the work	Solution is correct and fully supported by the work
Comment:			

Extensions

0	1	2	3
No Attempt	Needs Improvement – attempt made, but does not logically follow from the work	Generalization is given – attempt made for logical support	Generalization is given, reader can follow the supporting logic and/or logical proof
Comment:			

Self-assessment

0	1	2	3
No Attempt	Needs Improvement	Adequate	Insightful
Comment:			