



Monday cup #3 – Solution

Posted on: April 15, 2019

Due on: April 21, 2019



A shepherd bought a Sheep flock. On his journey through the desert, he noticed that the flock all had a very bad disease and would be of no use for traveling any further. He returned to the seller and asked for new flock. The seller said, “I will gladly give you the same number of flock that you bought if you can tell me how many flock you started with.” The flock shepherd could not remember exactly how many he had bought, but he knew it was less than 100. He remembered that if the flock walked in rows of 2, one walked alone; in rows of 3, one walked alone; in rows of 4, one waked alone; and in rows of 5, one walked alone. How many Sheep were in the flock?

Solution: 61 sheep. While we received lots of proofs of this fact (and one cool polynomial proof as well), here a solution adapted from Dato Tavgiridze’s submission.

answer is 61 sheep because 61 is number which deduct 1 you will divide 2;3;4;5. For example:
(61-1):5=12 (61-1):4=12. (61-1):3=20. (61-1):2=30

There were correct solutions from Dato Tavgiridze (Georgia, the country), Nika Darsalia (Georgia, the country) and Gela Tsetskhladze (Georgia, the country). The prize was split between Tavgiridze and Darsalia

Rules

1. Anyone is eligible to participate. Each solution is to be the work of one individual without any input from faculty or others. An answer must be accompanied by appropriate justifications to be considered correct.
2. The solution is to be submitted with the solver’s name, email, year in school (if applicable), local phone number, and local address. If you are submitting this for possible credit in a class, include your class number and instructor’s name.
3. The solution is to be typed or legibly written. Solutions must be submitted to the by 2 p.m. on the due date.
4. Entries will be graded on clarity of exposition and elegance of solution. An award of **GEL10** will be given for the best correct solution. In the case of a two-way tie, the award will be split. If there are more than two best solutions, a drawing will be held to determine two award winners.
5. Graduate students, faculty, and members of the general public are encouraged to submit solutions, but they will not be considered.

გზადათბის თასო, кубок понедельника, Monday cup, Coppa del lunedì, Coupe du lundi
Solution for this problem can be submitted proveweek@gmail.com