\*\*\*Answers only unless instructed… Must use Microsoft Word Equation Editor ONLY!

Problem: A survey of 615 teenagers found that 44% of the boys and 35% of the girls would like to be taller. Altogether, 231 teenagers in the survey wished they were taller.

1. Set up a system of equations to model this scenario.
2. Use determinants and Cramer’s rule to determine how many boys and how many girls were in the survey.
3. Answer the question in (2) by using inverse matrices.
4. Compare the two methods. When might one method be better than another method for solving a system?

Concept Exercise: Given the above problem, provide written responses to address the following points as precisely and thoroughly as possible.

1. Explain the problem in your own words.
2. What mathematical concepts learned in this module apply to this problem?
3. Explain the steps you must take to solve this problem?
4. What is the most difficult aspect of solving this problem?
5. Explain exactly what the answer means from a mathematical perspective.