Question 31 is an open-response question.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF THE QUESTION.**
- **Show all your work (diagrams, tables, or computations) in your Student Answer Booklet.**
- **If you do the work in your head, explain in writing how you did the work.**

Write your answer to question 31 in the space provided in your Student Answer Booklet.

31 Mr. Gomez's mathematics test consists of multiple-choice and short-answer questions only.

- Each multiple-choice question is worth 3 points.
- Each short-answer question is worth 5 points.

Let x and y be defined as follows:
- x = the number of multiple-choice questions
- y = the number of short-answer questions

a. The test has a total of 30 questions. Write an equation in terms of x and y that represents this fact.

b. Write an expression in terms of x that represents the total point value of all the multiple-choice questions.

c. Write an expression in terms of y that represents the total point value of all the short-answer questions.

d. The test has a total of 100 points. Write an equation in terms of x and y that represents this fact.

e. Use your equations from parts (a) and (d) to determine how many multiple-choice questions **and** how many short-answer questions are on the test. Show your work.