

Question 36 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 36 in the space provided in your Student Answer Booklet.

- 36** A construction contractor received two deliveries of building supplies from a lumberyard. The two deliveries included 10 boxes of nails, which cost a total of \$110.

a. Write and solve an equation to determine n , the cost in dollars of one box of nails.

The table below shows the numbers of sheets of plywood, trim boards, and boxes of nails delivered, and the total cost of each delivery.

	Sheets of Plywood	Trim Boards	Boxes of Nails	Total Cost (\$)
First Delivery	6	40	5	609
Second Delivery	8	20	5	527

- b. Using your answer from part (a) and the information from the table, create a system of equations that can be used to determine x , the cost in dollars of one sheet of plywood, and y , the cost in dollars of one trim board.
- c. Determine the cost in dollars of one sheet of plywood and the cost in dollars of one trim board. Show or explain how you got your answer.

The contractor has an additional \$200 to spend. She tells her assistant to order at least 5 trim boards and as many sheets of plywood as possible with this money.

- d. What is the maximum number of sheets of plywood that the assistant could order following the contractor's instructions? Show or explain how you got your answer.