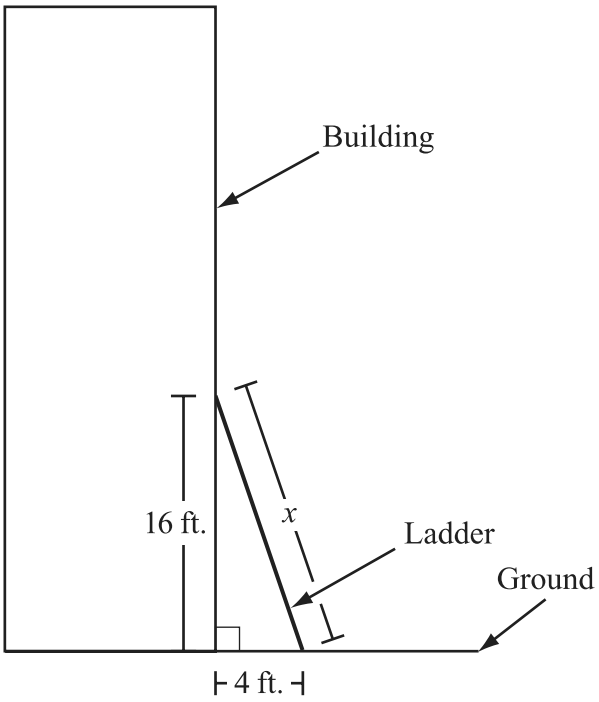
Questions 41 and 42 are open-response questions.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF EACH 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 41 in the space provided in your Student Answer Booklet.

41 A ladder is leaning against the side of an office building, as shown in the diagram below.



The top of the ladder reaches a point on the building that is 16 feet above the ground. The bottom of the ladder is 4 feet from the base of the building.

a. Write an equation that could be used to find x, the length in feet of the ladder.

b. Use the equation you wrote in part (a) to find x, the length, to the nearest tenth of a foot, of the ladder. Show or explain how you got your answer.

A second ladder that is 32 feet in length will be leaned against the same building. The bottom of the second ladder will be placed 7 feet from the base of the building.

c. What is the height, to the nearest tenth of a foot, of the point the top of the second ladder will reach on the building? Show or explain how you got your answer.