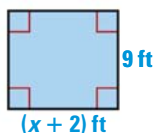
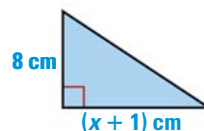


GEOMETRY Write and solve an inequality to find the possible values of x .

34. Area > 81 square feet



35. Area ≤ 44 square centimeters



36. **CHALLENGE** For which value of a are all the solutions of $2(x - 5) \geq 3x + a$ less than or equal to 5?

PROBLEM SOLVING

EXAMPLE 5

on p. 371
for Exs. 37–40

37. **CD BURNING** A blank CD can hold 70 minutes of music. So far you have burned 25 minutes of music onto the CD. You estimate that each song lasts 4 minutes. What are the possible numbers of additional songs that you can burn onto the CD?

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38. **BUSINESS** You spend \$46 on supplies to make wooden ornaments and plan to sell the ornaments for \$8.50 each. What are the possible numbers of ornaments that you can sell in order for your profit to be positive?

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39. **TAKS REASONING** A zookeeper is designing a rectangular habitat for swans, as shown. The zookeeper needs to reserve 500 square feet for the first 2 swans and 125 square feet for each additional swan.



a. **Calculate** What are the possible numbers of swans that the habitat can hold? *Explain* how you got your answer.

b. **Compare** Suppose that the zookeeper increases both the length and width of the habitat by 20 feet. What are the possible numbers of additional swans that the habitat can hold?

40. **TAKS REASONING** A gym is offering a trial membership for 3 months by discounting the regular monthly rate by \$50. You will consider joining the gym if the total cost of the trial membership is less than \$100. Which inequality can you use to find the possible regular monthly rates that you are willing to pay?

(A) $3x - 50 < 100$

(B) $3x - 50 > 100$

(C) $3(x - 50) < 100$

(D) $3(x - 50) > 100$