

## Deer Ticks

*Note: This exercise goes with Chapter 1 of Finite Mathematics and Calculus with Applications.*

Deer ticks cause concern because they can carry lyme disease. One study found a relationship between the density of acorns produced in the fall and the density of deer tick larvae the following spring.\* The relationship can be approximated by the linear function

$$y = 34x + 230,$$

where  $x$  is the number of acorns per square meter in the fall, and  $y$  is the number of deer tick larvae per 400 square meter the following spring. According to this formula, approximately how many acorns per square meter would result in 1000 deer tick larvae per 400 square meters?

**Answers** can be found on the next page.

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\* *Science*, Vol. 281, No. 5375, July 17, 1998, p. 350-351.

Answers to **Deer Ticks**

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