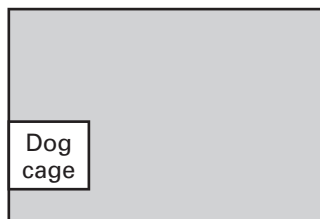


**LESSON**  
**8.2****Real-Life Application:**  
**When Will I Ever Use This?***For use with the lesson "Multiply Polynomials"***Cutting the Lawn**

Cutting lawns is a popular summer job. It is a great way to earn money and to help others in your community.

Your neighbor asks you to cut her lawn. Her lawn is  $(6x + 3)$  feet wide and  $(10x + 3)$  feet long. A section of the lawn is fenced in for her dog. The dog cage is  $(x - 2)$  feet wide and  $(x + 2)$  feet long.



- Write a polynomial expression that represents the total area of the lawn. Give your answer as a trinomial.
- Write a polynomial expression that represents the area of the dog cage. Give your answer as a binomial.
- Write a polynomial expression that represents the area of the lawn that you will mow. Give your answer as a binomial.
- Copy and complete the table.

$x$ (feet)	6	9	12
Total area of lawn (square feet)			
Area of dog cage (square feet)			
Area of lawn mowed (square feet)			

- When  $x$  is doubled from 6 to 12, do the areas also double? *Explain.*