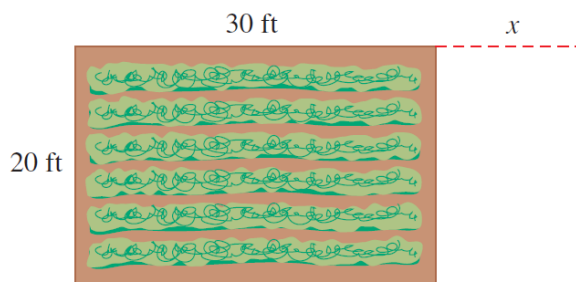


## Exercise 85

**Area of a Garden** Mary's backyard vegetable garden measures 20 ft by 30 ft, so its area is  $20 \times 30 = 600 \text{ ft}^2$ . She decides to make it longer, as shown in the figure, so that the area increases to  $A = 20(30 + x)$ . Which property of real numbers tells us that the new area can also be written  $A = 600 + 20x$ ?



### Solution

The distributive property of real numbers allows us to write the formula for area as

$$\begin{aligned} A &= 20(30 + x) \\ &= 20(30) + 20(x) \\ &= 600 + 20x. \end{aligned}$$