

## Lesson 6-7

## Problem

A part time landscaper is considering using a new tool rental company. The new company charges a fixed fee of \$8 plus \$3.25 per hour to rent a tiller. The rental company that he currently uses charges \$4.50 per hour, and the cost of renting the tiller typically ranges from \$18 to \$45. Compare the costs of using the two different companies.

## Solve the Problem

Use a table to find a pattern or function rule for the new service.

The function is  $c = 8 + 3.25h$ . Use the lower price (18), and solve for  $h$ . Then use the upper price (45), and solve for  $h$ .

	Fixed fee	Cost of hours	Total cost
One hour	8.00	$3.25(1) = 3.25$	11.25
Two hours	8.00	$3.25(2) = 6.50$	14.50
Three hours	8.00	$3.25(3) = 9.75$	17.75
$h$ hours	8.00	$3.25(h) = 3.25h$	$8 + 3.25h$

$$\begin{aligned} 18 &= 8 + 3.25h \\ 10 &= 3.25h \\ 3.08 &= h \end{aligned}$$

$$\begin{aligned} 45 &= 8 + 3.25h \\ 37 &= 3.25h \\ 11.4 &= h \end{aligned}$$

With the new rental company, he can rent a tiller between 3.08 and 11.4 hours for the price range. To find the number of hours he currently can rent the tiller, divide the cost by the hours.

$$18 \div 4.50 = 4$$

$$45 \div 4.50 = 10$$

Currently, he can rent a tiller between 4 and 10 hours for the price range.