Use Scaling

Multiplying or dividing two related quantities by the same number is called **scaling**. Sometimes you may need to *scale back* and then *scale forward* to find an equivalent ratio.

Examples

Tutor

3. **Cans of corn are on sale at 10 for $4. Find the cost of 15 cans.**

Cans of Corn	10		15
Cost in Dollars	4		■

There is no whole number by which you can multiply 10 to get 15. So, scale back to 5 and then scale forward to 15.

	÷2	×3
Cans of Corn	10	5	15
Cost in Dollars	4	2	6
	÷2	×3

Divide each quantity by a common factor, 2.

Then, since 5 × 3 = 15, multiply each quantity by 3.

So, 15 cans of corn would cost $6.

4. **Joe mows lawns during his summer vacation to earn money. He took 14 hours last week to mow 8 lawns. At this rate, how many lawns could he mow in 49 hours?**

Is there a whole number by which you can multiply 14 to get 49? _____

Scale back to _____, and then scale forward to _____.

	÷2		×7
Number of Hours	14	7	49
Number of Lawns	8	4	28
	÷2		×7

So, Joe can mow _____ lawns in 49 hours.

5. **On her vacation, Leya exchanged $50 American and received $60 Canadian. Use a ratio table to find how many Canadian dollars she would receive for $20 American.**

Show your work.

Set up a ratio table. Use scaling to find the desired quantity.

	÷10		×4
Canadian Dollars	60	6	24
American Dollars	50	5	20
	÷10		×4

Divide each quantity by a common factor, 10.

Then, since 5 × 4 = 20, multiply each quantity by 4.

Leya would receive $24 Canadian for $20 American.