

February 25th

A woman went up a hill at a rate of one and a half miles per hour and came down at the rate of four and a half miles per hour. It took her six hours to make the return trip.

How far is it to the top of the hill?

It will have taken 3 times as long to go up as come down

(since $4\frac{1}{2} \div 1\frac{1}{2} = 3$)

So divide the 6 hours in the ratio 3:1,

which gives $4\frac{1}{2}$: $1\frac{1}{2}$

It took $4\frac{1}{2}$ hours up and $1\frac{1}{2}$ hours down.

In either part of the journey, distance = speed x time

$$= 4\frac{1}{2} \times 1\frac{1}{2} = \mathbf{6\frac{3}{4} \text{ miles}}$$