

You assume that the distance up the mountain is equal to the distance down the mountain, so start by drawing a line that represents this distance.:

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Then, in relation to this distance the problem tells you some other information you can add to your diagram. For instance, the ski lift moves at 6mph and it took her  $x$  minute to get up the mountain.  $x$  minutes can be written as  $x/60$  hours. We do this to keep the units consistent. So since Distance =  $R(T)$  The Distance up the mountain was  $6(x/60)$ . Round Trip was 40 minutes long. So Time Up + Time Down = 40 minutes. 40 minutes = .67 hours

$$\text{Time up} = x$$

$$x + \text{time down} = .67 \text{ hours}$$

$$\text{Time Down} = .67 - (x/60)$$

$$\text{Speed going down was 54 mph, so distance down} = 54(.67 - (x/60))$$

Distance Up

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$$6(x/60)$$

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Distance Down

$$54(.67 - (x/60))$$

I converted 40 minutes to hours so that the units match up with 6mph. For Distance to equal  $R(T)$  your units in the rate and in the time had to cancel and leave miles—a distance unit. The only way this would happen is if minutes were converted to hours.