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If you travel a distance $d$ at a rate $r_1$ in time $t_1$ and make the return trip at a rate $r_2$ in time $t_2$, what is the average rate $r$ of the full trip?

If the rate of one way on a plane trip is 380 mph, and the return rate over the same distance is 420 mph, compute the average rate of the trip? Compare to the average rate of the trip to the average of the rates of each way. What do you notice? Explain.