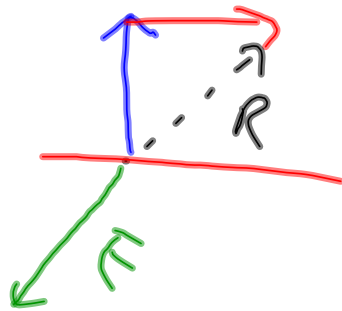
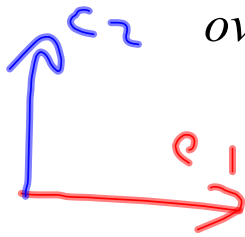


Equilibrant = a vector equal and opposite of the *Resultant*

...it is a single vector that *equalizes or overcomes* the components acting.



same angle 180°

$$E = -R$$

ie

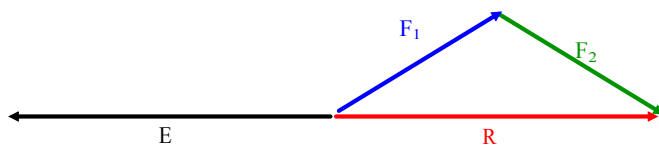
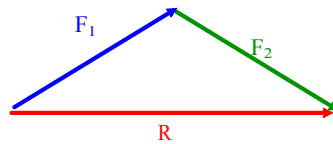
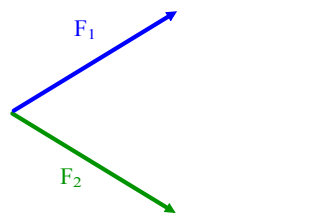
$$R = 100\text{ N at } 40^\circ$$

$$E = 100\text{ N at } 220^\circ$$

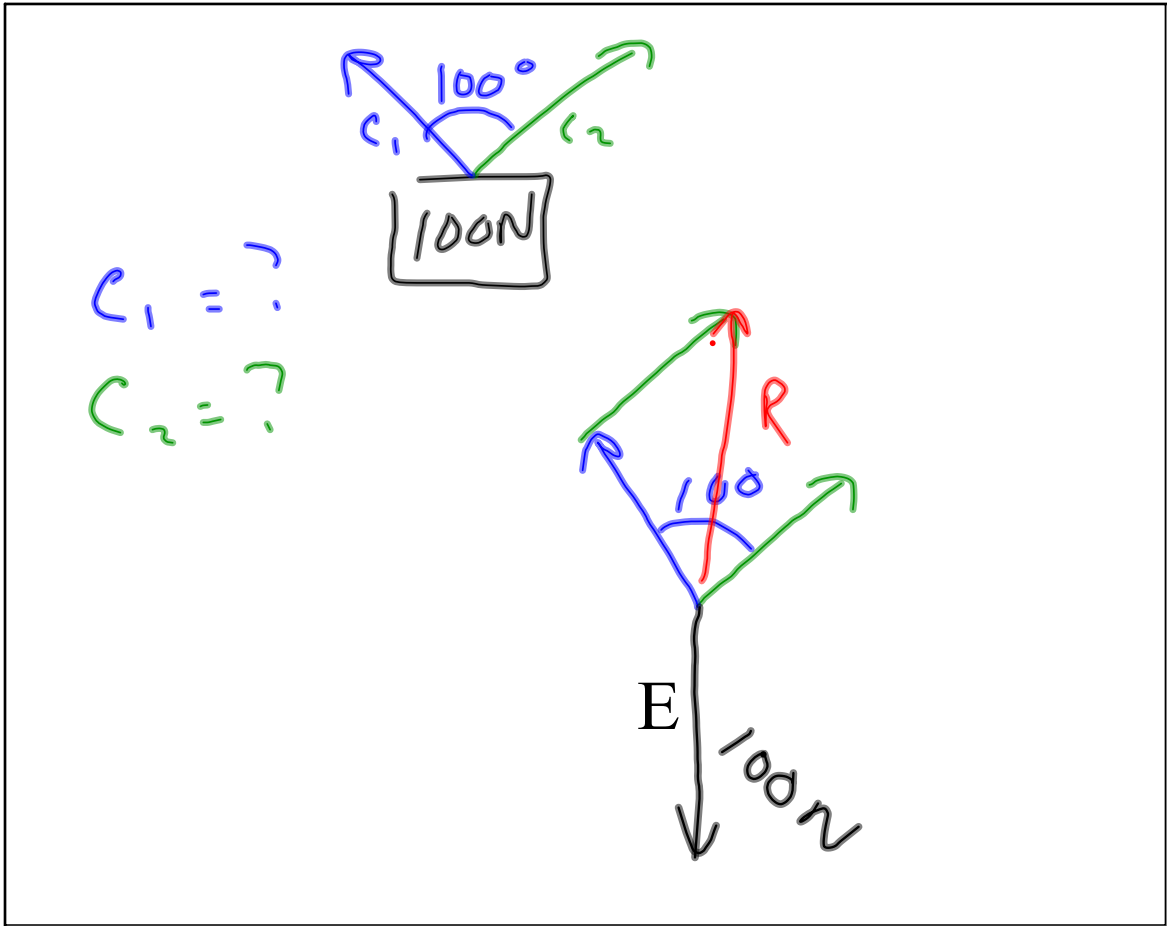
Oct 16-8:13 AM

$F_1 = 100\text{ N at } 45^\circ$

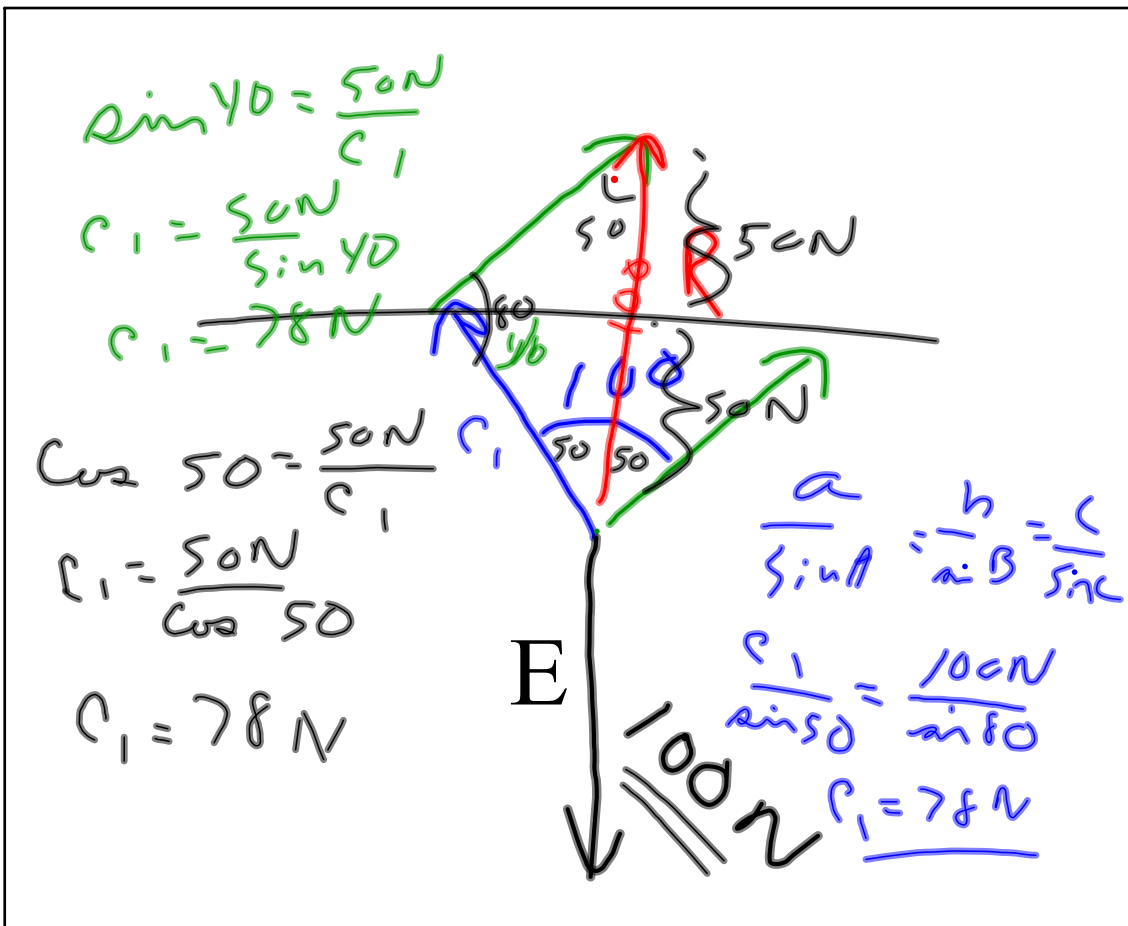
$F_2 = 100\text{ N at } 315^\circ$



Oct 16-8:28 AM



Oct 16-11:47 AM



Oct 16-11:47 AM

$\sin 40 = \frac{50}{c_1}$
 $c_1 = 78N$

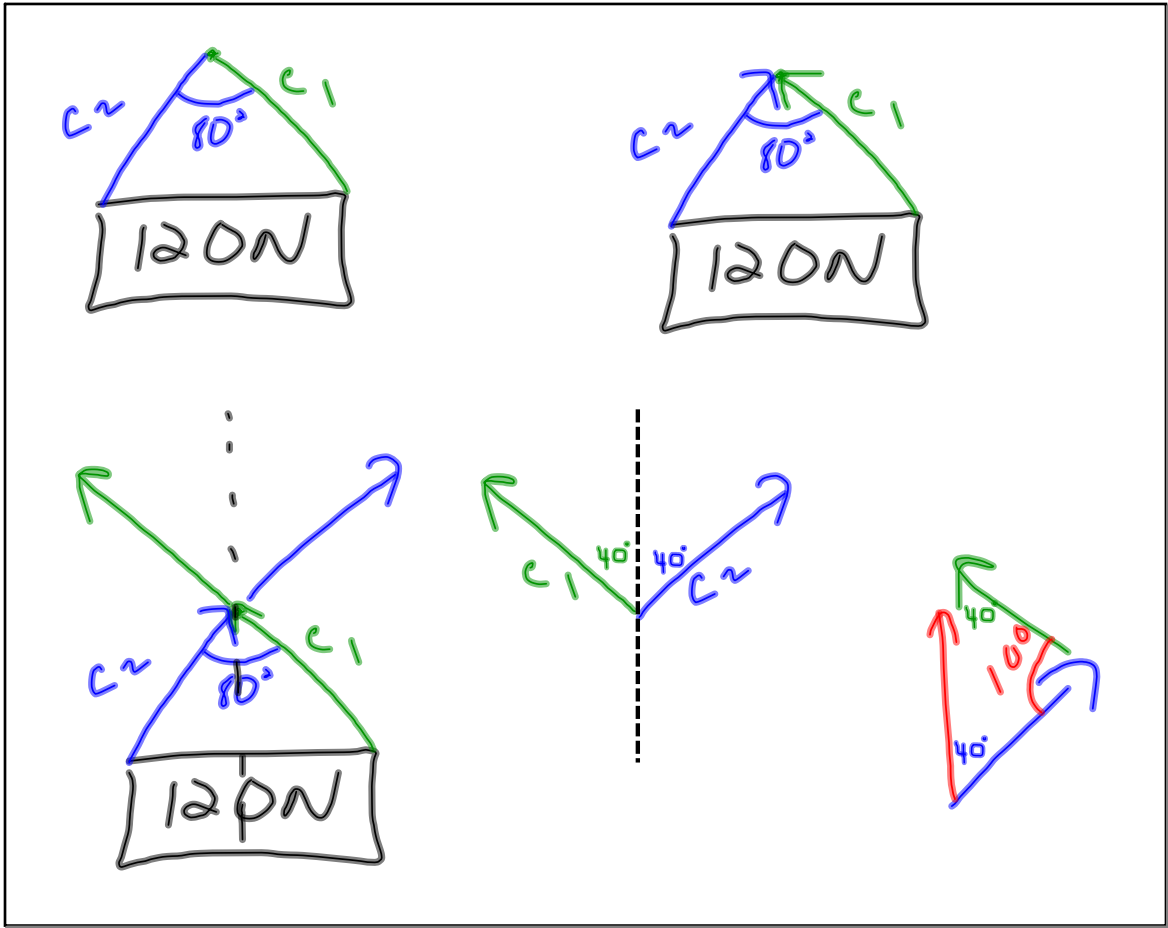
$\cos 50 = \frac{50}{c_1}$
 $c_1 = 78N$

Or, use law of sines to solve for one on the components

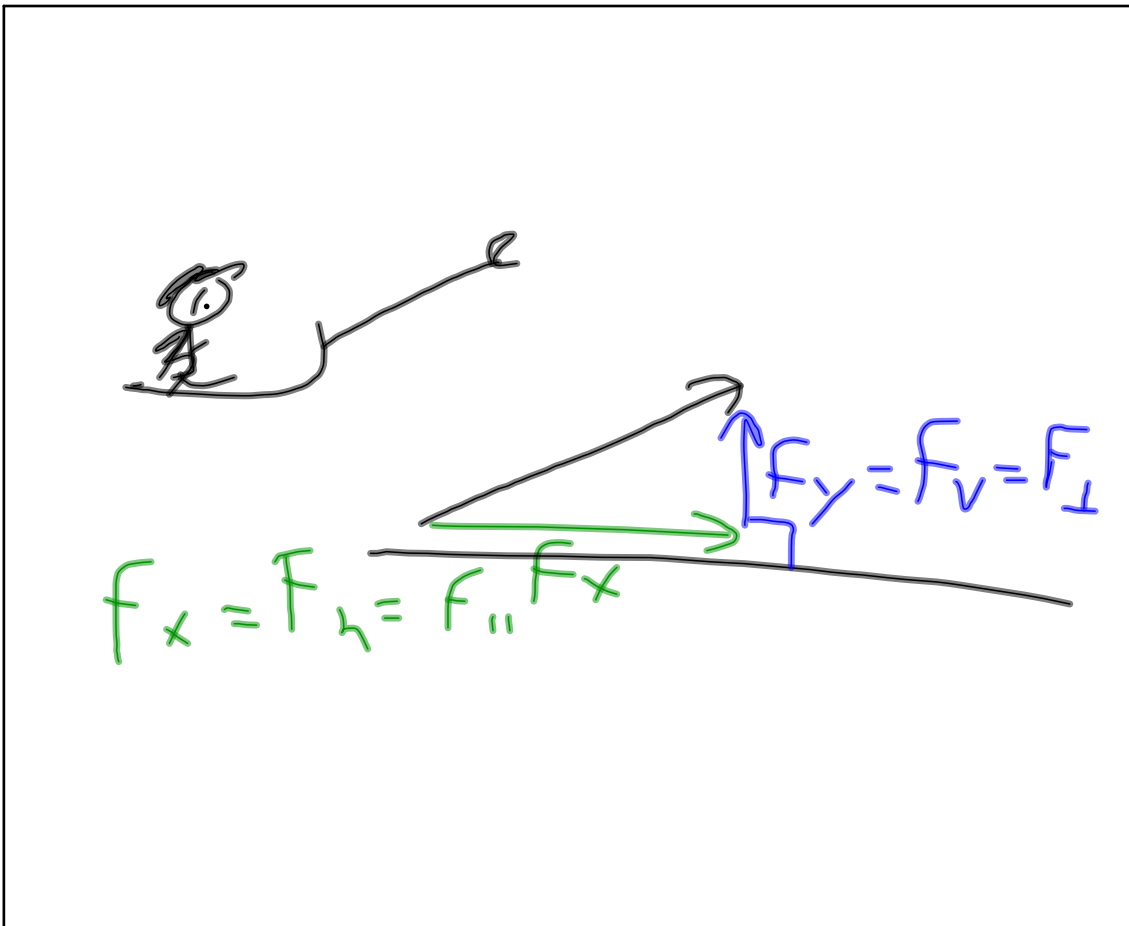
Oct 16-1:25 PM

$\cos 35 = \frac{125N}{c_1}$
 $c_1 = \frac{125N}{\cos 35} = 153N$

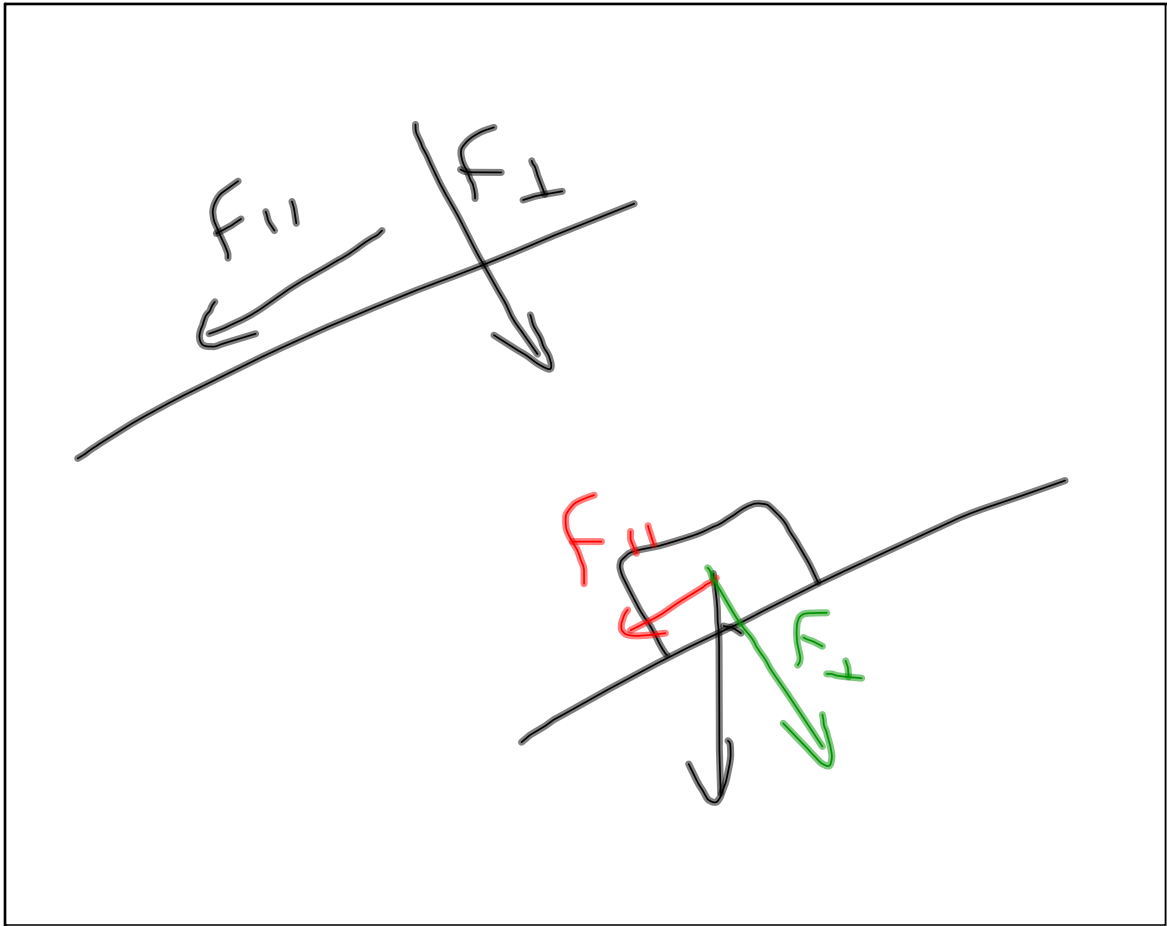
Oct 10-1:24 PM



Oct 16-8:31 AM

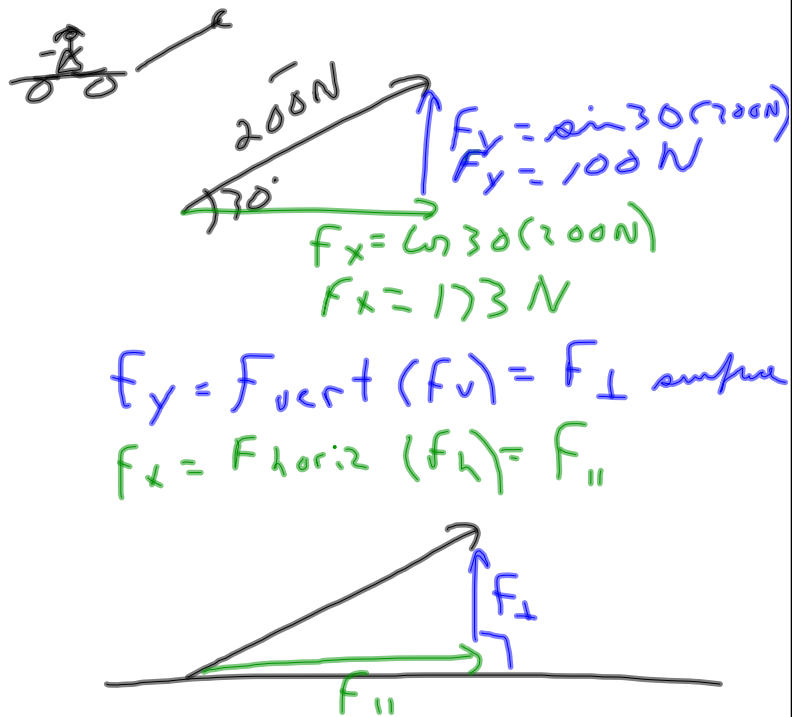


Oct 16-1:31 PM

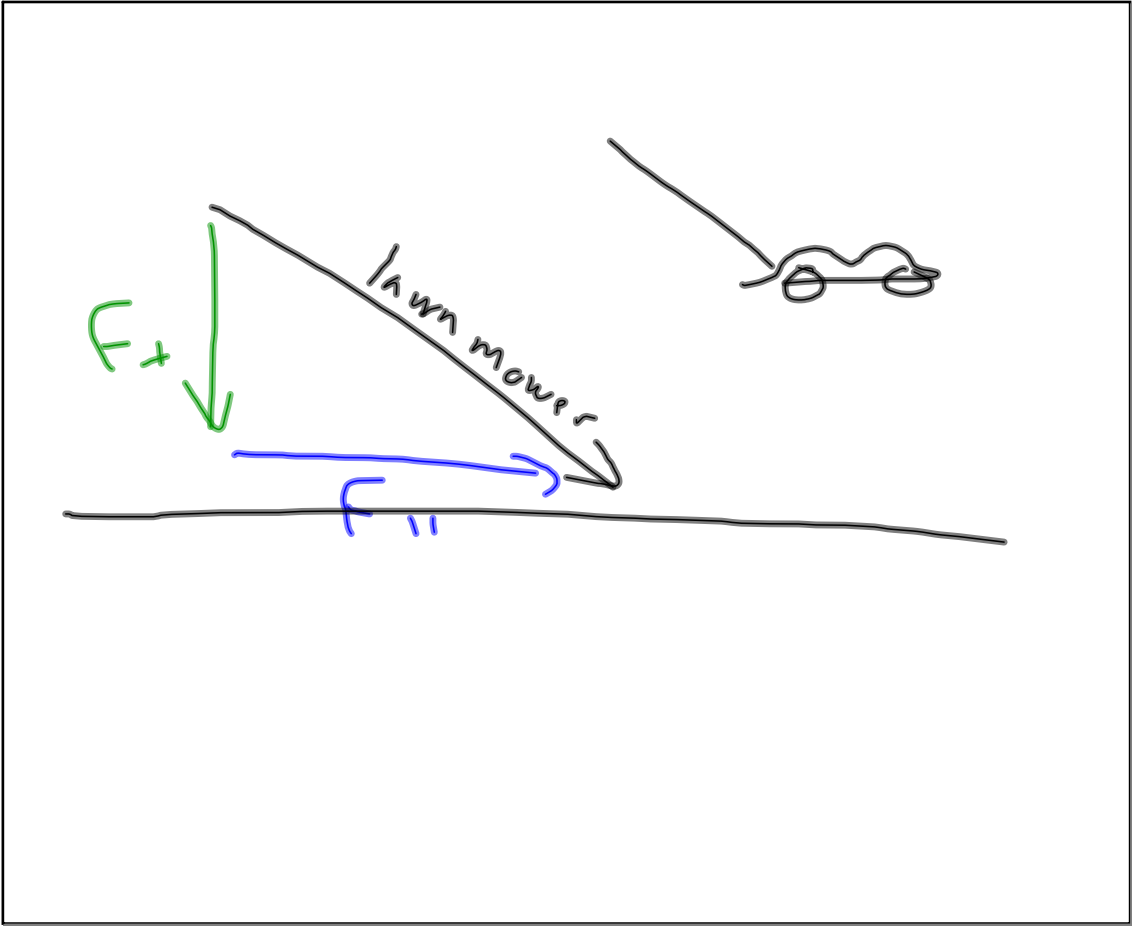


Oct 16-1:34 PM

Little Jimmy pulls his sister on a wagon ride applying a force of 200. N on the handle. The handle makes an angle of 30° with the road. What are the vertical and horizontal components of his force?



Oct 16-12:07 PM



Oct 16-12:12 PM