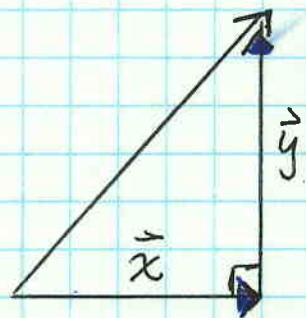
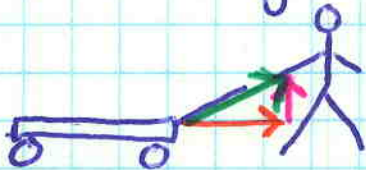


8-1-4 Component Vectors

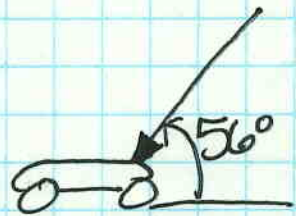
Component vectors \rightarrow 2 or more vectors whose sum is \vec{r} .

Rectangular Components \rightarrow perpendicular vectors that Resolve (add to) the original vector.

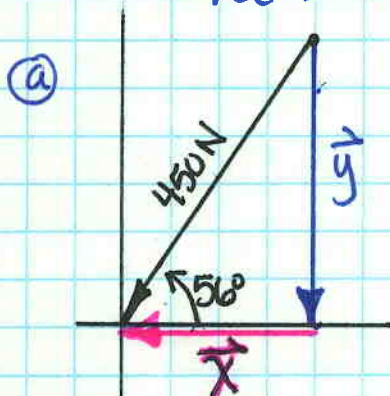


Example 6 Resolve a Force into Rectangular Components

Heather is pushing the handle of a lawn mower with a force of 450 N at an angle of 56° with the ground.



a. Draw a diagram that shows the resolution of the force.



b. Find the magnitudes of the horizontal and vertical components.

$$\cos 56^\circ = \frac{|x|}{450}$$

$$450 \cos 56^\circ = |x|$$

$$|x| = 252 \text{ N}$$

$$\sin 56^\circ = \frac{|y|}{450}$$

$$450 \sin 56^\circ = |y|$$

$$|y| = 373 \text{ N}$$