

Task. Resolve the force if 100 N acting at an angle of 39° with the horizontal in 2 vertical and horizontal components.

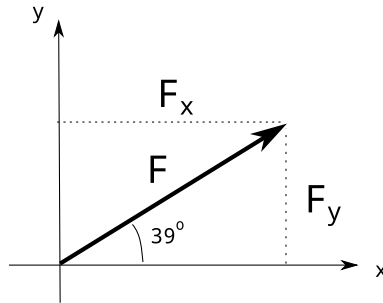
Solution. We assume that the vector F of the force lays in the plane (x, y) so that the x -axis is horizontal and y -axis is vertical. Let $F = (F_x, F_y)$ be the coordinates of its vector. We should find F_x and F_y .

By assumption the length of this vector $|F| = 100$ N, and the angle with x -axis is 39° . Therefore,

$$F_x = |F| \cos 39^\circ = 100 * 0.77715 = 77.715 \text{ N},$$

and

$$F_y = |F| \sin 39^\circ = 100 * 0.62932 = 62.932 \text{ N}.$$



Answer. $F_x = 77.715$ N, $F_y = 62.932$ N.