Two forces act on a 55-kg object.

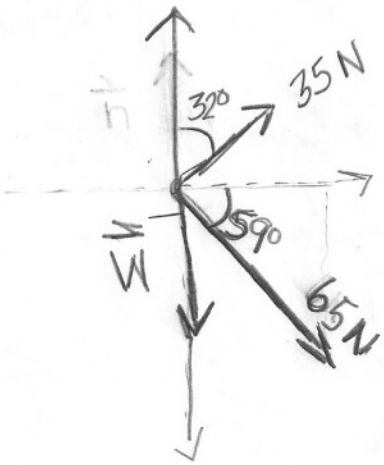
ONE has magnitude 65 N directed 59° clockwise from positive x-axis.

The other has magnitude 35 N at 32° clockwise from the positive y axis.

What is the acceleration of the object?

Answer is given as:
1.1 m/s²

Known
mass 55 kg



	x	y
F_{65}	$\cos(59°)(65N)$	$-\sin(59°)(65N)$
T_{35}	$\sin(32°)(35N)$	$\cos(32°)(35N)$
$\vec{w}$	0	-539 ← $\vec{w}$ 55 kg (9.8 m/s²)

$$\Sigma F_x = \sin(32°)(35N) + \cos(59°)(65)N = m a_x$$

$$620.19 = m a_x$$

$$a_x = 11.28$$

$$\Sigma f(x) + \Sigma f(y)$$

$$= 11.28 - 10.27$$

$$= 1.01 m/s^2$$

$$\Sigma F_y = \cos(32°)(35N) - \sin(59°)(65N) - 55kg \cdot 9.8 m/s^2$$

$$-565.03 = m a_y$$

$$a_y = -10.27$$