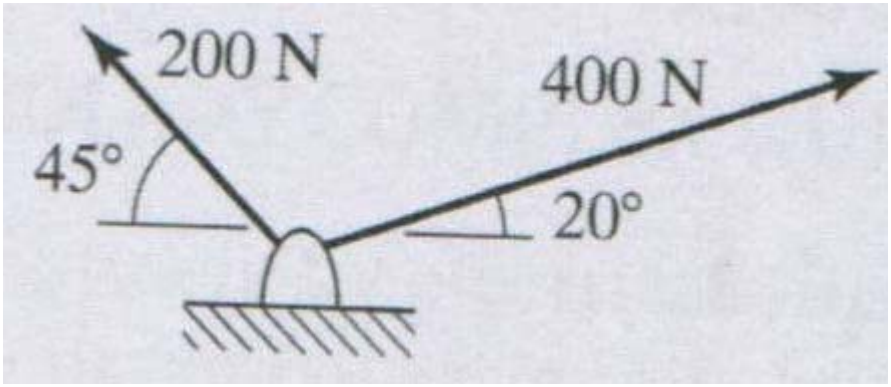
Resolving Forces



$F_{x1} := 400N \cdot \cos(20deg)$

$F_{x1} = 375.877\,N$

$F_{y1} := 400N \cdot \sin(20deg)$

$F_{y1} = 136.808\,N$

$F_{x2} := -200N \cdot \cos(45deg)$

$F_{x2} = -141.421\,N$

$F_{y2} := 200N \cdot \sin(45deg)$

$F_{y2} = 141.421\,N$

$F_x := F_{x1} + F_{x2}$

$F_x = 234.456\,N$

$F_y := F_{y1} + F_{y2}$

$F_y = 278.229\,N$

$F_r := \sqrt{F_x^{\,2} + F_y^{\,2}}$

$F_r = 363.842\,N$

$\theta := \operatorname{atan}\left(\frac{F_y}{F_x}\right)$

$\theta = 49.88\,deg$