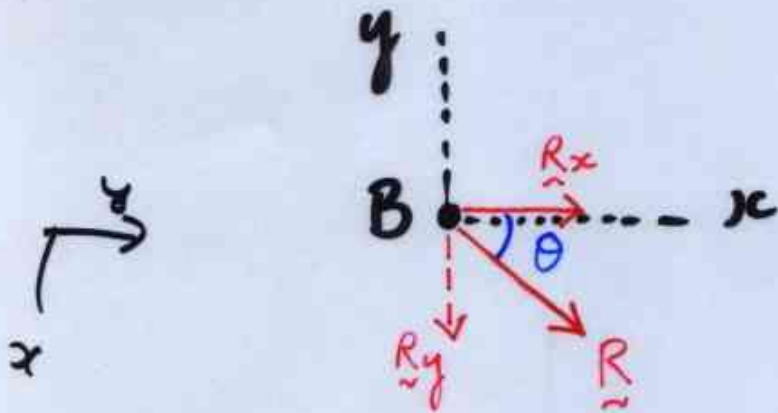


ALGEBRAChoose x - y with origin B

$$R_x = \sum F_x = 800 - 600 \cos \alpha = 346 \text{ N}$$

$$R_y = \sum F_y = -600 \sin \alpha = -393 \text{ N}$$

$$R = \sqrt{R_x^2 + R_y^2} = \underline{524 \text{ N}}$$

$$\theta = \tan^{-1} \frac{|R_y|}{|R_x|} = \underline{48.6^\circ}$$