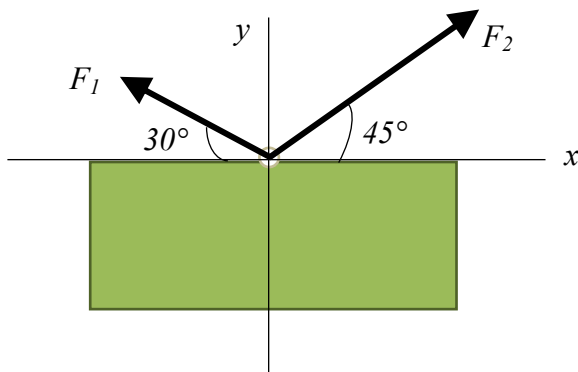12. Determine the magnitude of the resultant force in both x and y directions if $F_1 \sim N(850, 40^2)$ N and $F_2 \sim N(1400, 80^2)$ N .

Solution: $F_x \sim N(253.8, 66.3^2)$ N and $F_y \sim N(1414.9, 60^2)$ N .