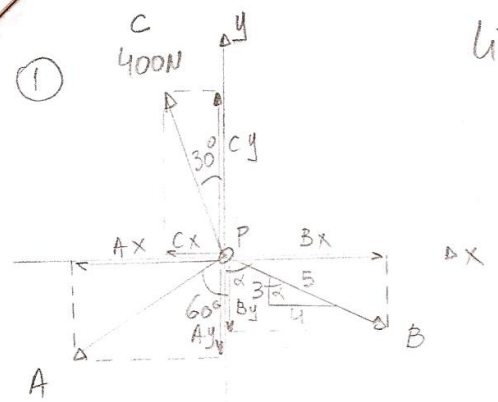
1



lista 3

$A_x = A.\text{sen}\,60° \Rightarrow \boxed{A_x = A.0{,}866}$

$A_y = A.\cos 60° \Rightarrow \boxed{A_y = A.0{,}5}$

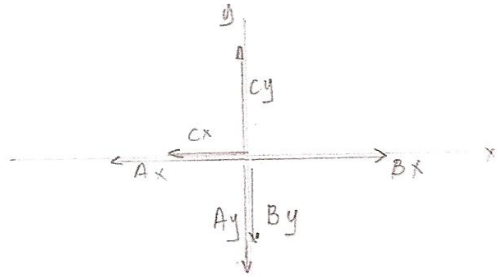
$C_x = 400N.\text{sen}\,30° \Rightarrow \boxed{C_x = 200N}$

$C_y = 400N.\cos 30° \Rightarrow \boxed{C_y = 346{,}4N}$

$tg\,\alpha = \frac{co}{ca} = \frac{sen}{cos} = \frac{4}{3}$

$tg\,\alpha = 1{,}3333 \Rightarrow \alpha = \frac{1{,}3333}{tg}$

$\alpha = 1{,}3333 \times tg^{-1} \Rightarrow \boxed{\alpha = 53{,}13}$



$B_x = B.\text{sen}\,53{,}13 \Rightarrow \boxed{B_x = B.0{,}80}$

$B_y = B.\cos 53{,}13 \Rightarrow \boxed{B_y = B.0{,}60}$

$(\overset{+}{\rightarrow})$
$\sum F_x = 0$

$B_x - A_x - C_x = 0 \Rightarrow B_x = A_x + C_x \Rightarrow B.0{,}80 = A.0{,}866 + 200N$

$$\boxed{B = \frac{A.0{,}866 + 200N}{0{,}80}} \quad (I)$$

$(+\uparrow)\ \sum F_y = 0$

$C_y - A_y - B_y = 0 \Rightarrow A_y = C_y - B_y \Rightarrow A.0{,}5 = 346N - B.0{,}60$

$A.0{,}5 = 346{,}4N - \left(\frac{A.0{,}866 + 200N}{0{,}80}\right).0{,}60$

$A.0{,}5 = 346{,}4N - (A.1.0825 + 250N).0{,}60$

$A.0{,}5 = 346{,}4N - A.0{,}6495 - 150N$

$A.0{,}5 + A.0{,}6495 = 346{,}4N - 150N$

$A.(0{,}5 + 0{,}6495) = 196{,}4N$

$A = \frac{196{,}4N}{1{,}1495} \Rightarrow \boxed{A = 170{,}86N}$

$B = \frac{(A.0{,}866) + 200N}{0{,}80}$

$B = \frac{170{,}86N.0{,}866 + 200N}{0{,}80}$

$\boxed{B = 435N}$