UDS

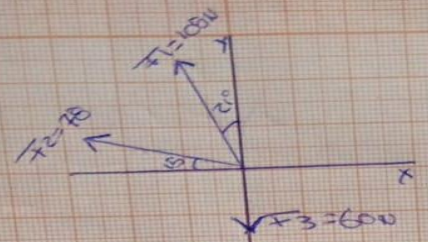
ISAAC GABRIEL AGUILAR CANO

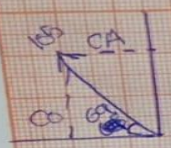
EJERCICIOS

ARQUITECTO: PEDRO ALBERTO GARCIA LOPEZ

4TO CUATRIMESTRE

LECENCIATURA: ARQUITECTURA





$\text{Sen } 69° = \frac{F_{1y}}{105} = F_{1y} \rightarrow \text{Sen } 69°(105) = 98.0259$

$\text{Cos } 69° = \frac{F_{1x}}{105} = F_{1x} \rightarrow \text{Cos } 69°(105) = 37.6286$

$\text{Sen } 15° = \frac{F_{2y}}{78} = F_{2y} \rightarrow \text{sen } 15°(78) = 20.1878$

$\text{Cos } 15° = \frac{F_{2x}}{78} = F_{2x} \rightarrow \text{Cos } 15°(78) = 75.3422$

$\Sigma F_y = 9.0259 + 20.1878 - 60N = 75.3422$ 58.2137

$\Sigma F_x = 37.6286 + 75.3422 = 112.9708$

$h = \sqrt{(58.2137)^2 + (112.9708)^2} =$

$h = \sqrt{16161.23652}$

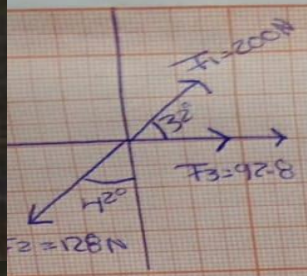
$= 127.08751\overline{52}$

$\tan \theta = 58.2137 / 112.9708$

$\tan = 0.5\overline{152}$

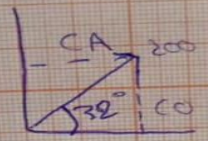
$\tan^{-1} = 27.2575$

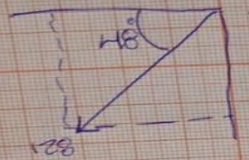
$90° - 27.2575 = 62.7425$



$\text{Sen } 38° = \frac{F_{1x}}{200N} = F_y \rightarrow \text{Sen } 32°(200)$ 105.7838

$\text{Cos } 36° = \frac{F_{1x}}{200N} = F_{1x} \rightarrow \text{Cos } 38°(200)$ 169.6096





$\text{Sen } 48° = \frac{F_{2y}}{128} = F_{2y} \rightarrow \text{Sen } 48°(128) = 95.1225$

$\text{Cos } 48° = \frac{F_{2x}}{128} = F_{2x} \rightarrow \text{Cos } 48°(128) = 85.6487$

$\Sigma F_y = 105.9388 - 95.1225 = 10.8155$

$\Sigma F_x = 169.6096 - 85.6487 + 97.8 = 181.7609$

10.8155	181.7609

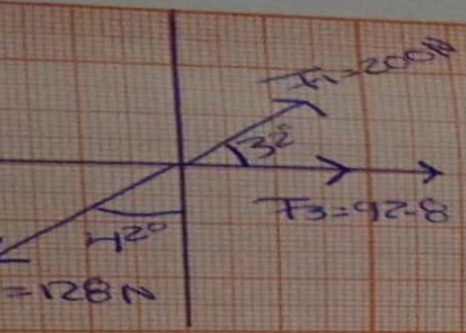
$h = \sqrt{(10.8155)^2 + (181.7609)^2} =$

$h = 182.0823$

$\tan \theta = 10.8155 / 181.7609$

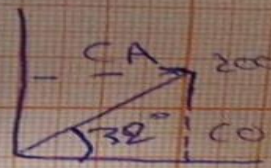
$\tan = 0.0595$

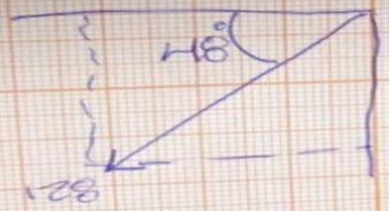
$\tan^{-1} = 3.4050\overline{84}$



$\text{Sen } 32° = \frac{F_{1y}}{200N} = F_y \rightarrow \text{Sen } 32°(200) = 105.9838$

$\text{Cos } 36° = \frac{F_{1x}}{200N} = F_{1x} \rightarrow \text{Cos } 32°(200) = 169.6096$





$\text{Sen } 48° = \frac{F_{2y}}{128} = F_{2y} \rightarrow \text{Sen } 48°(128) = -95.1225$

$\text{Cos } 48° = \frac{F_{2x}}{128} = F_{2x} \rightarrow \text{Cos } 48°(128) = -85.6487$

$\Sigma F_y = 105.9838 - 95.1225 = 10.8155$

$\Sigma F_x = 169.6096 - 85.6487 + 97.8 = 181.7609$

$h = \sqrt{(10.8155)^2 + (181.7609)^2} =$

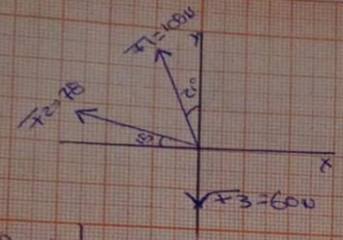
$h = 182.0823$

10.8155	181.7609

$\tan \theta = 10.8155 / 181.7609$

$\tan = 0.0595$

$\tan^{-1} = 3.405084$



$\text{Sen } 69° = \frac{F_{1y}}{105} = F_{1y} \rightarrow \text{Sen } 69°(105) = 98.0259$

$\text{Cos } 69° = \frac{F_{1x}}{105} = F_{1x} \rightarrow \text{Cos } 69°(105) = 37.6288$

$\text{Sen } 15° = \frac{F_{2y}}{78} = F_{2y} \rightarrow \text{Sen } 15°(78) = 20.1878$

$\text{Cos } 15° = \frac{F_{2x}}{78} = F_{2x} \rightarrow \text{Cos } 15°(78) = 75.3422$

$\Sigma F_y = 98.0259 + 20.1878 - 60N = 58.2137$

$\Sigma F_x = 37.6288 + 75.3422 = 112.9708$

$h = \sqrt{(58.2137)^2 + (112.9708)^2} =$

$h = \sqrt{16161.23652}$

$= 127.0875152$

$\tan \theta = 58.2137 / 112.9708$

$\tan = 0.5152$

$\tan^{-1} = 27.2575$

$90° - 27.2575 = 62.7425$