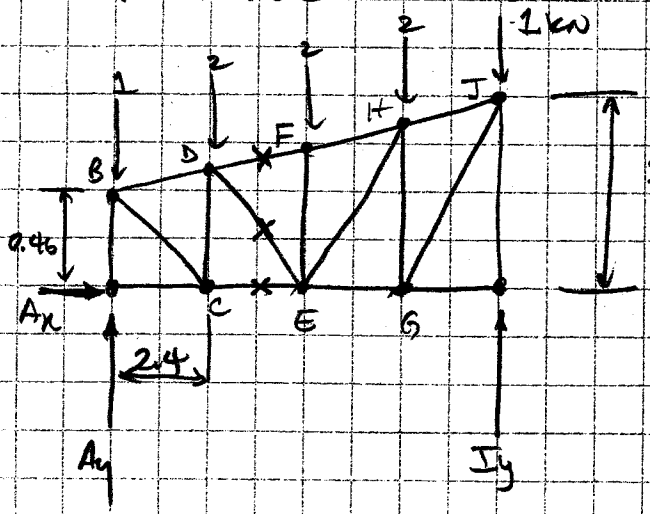
GNG 1505 QUIZ # 6.57 (CE, DE, DF) (GROUPE DE 2)



Réactions aux Appuis:

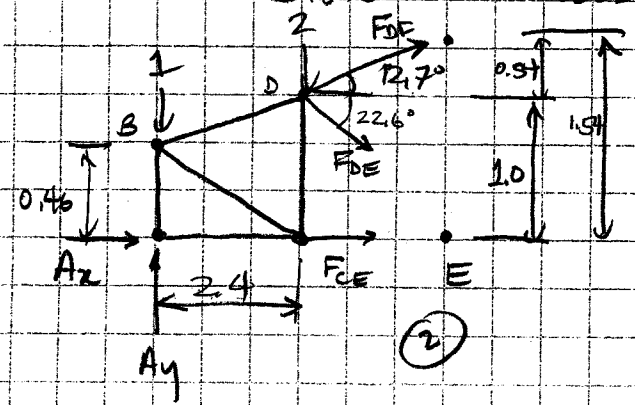
$\circlearrowleft \sum M_I = 0$

$-A_y(2.4)(4) + 1(2.4)(4) + 2(2.4)(1+2+3) = 0$

$\boxed{A_y = 4\ kN}$ (2)

$\sum F_x = 0 \Rightarrow \boxed{A_x = 0}$

Section Droite du Treillis:



(2)

$\sum M_D = 0 \Rightarrow F_{CE}(1) + 1(2.4) - 4(2.4) = 0$

$F_{CE} = 7.2\ kN\ [T]$ (2)

$\sum M_E = 0 \Rightarrow -4(4.8) + 1(4.8) + 2(2.4) - F_{DF}\sin 12.7°(3.4) - F_{DF}\cos 12.7°(1.0) =$

$F_{DF} = \dfrac{-9.6}{\cos 12.7°(1.0) + \sin 12.7°(2.4)} = -6.39\ kN = 6.39\ kN\ [C]$

(2)

$\sum F_x = 0 \Rightarrow F_{CE} + F_{DE}\cos 22.6° + F_{DF}\cos 12.7° = 0$

$F_{DE} = \dfrac{-7.2 + 6.39\cos 12.7°}{\cos 22.6°}$

$= -1.047\ kN$

$F_{DE} = 1.047\ kN\ [C]$ (2)