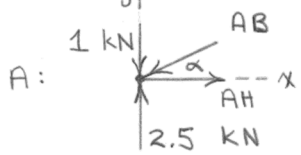
4/23 By symmetry, $A = E = 2.5$ kN; $\alpha = \tan^{-1}\left(\frac{2}{4}\right) = 26.6°$

A:



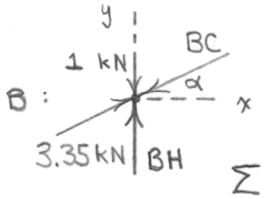
$\Sigma F_y = 0$: $2.5 - 1 - AB \sin\alpha = 0$

$AB = 3.35$ kN C

$\Sigma F_x = 0$: $-3.35 \cos\alpha + AH = 0$

$AH = 3$ kN T

B:



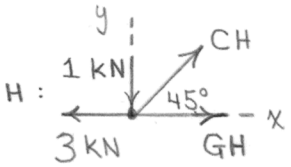
$\Sigma F_x = 0$: $3.35 \cos\alpha - BC \cos\alpha = 0$

$BC = 3.35$ kN C

$\Sigma F_y = 0$: $-1 + (3.35 - 3.35)\sin\alpha + BH = 0$

$BH = 1$ kN C

H:



$\Sigma F_y = 0$: $-1 + CH \sin 45° = 0$

$CH = 1.414$ kN T

$\Sigma F_x = 0$: $-3 + 1.41 \cos 45° + GH = 0$

$GH = 2$ kN T

By inspection of joint G and $\Sigma F_y = 0$, $CG = 0$.

By symmetry,

$DE = AB = 3.35$ kN C

$CD = BC = 3.35$ kN C

$EF = AH = 3$ kN T

$DF = BH = 1$ kN C

$CF = CH = 1.414$ kN T

$FG = GH = 2$ kN T