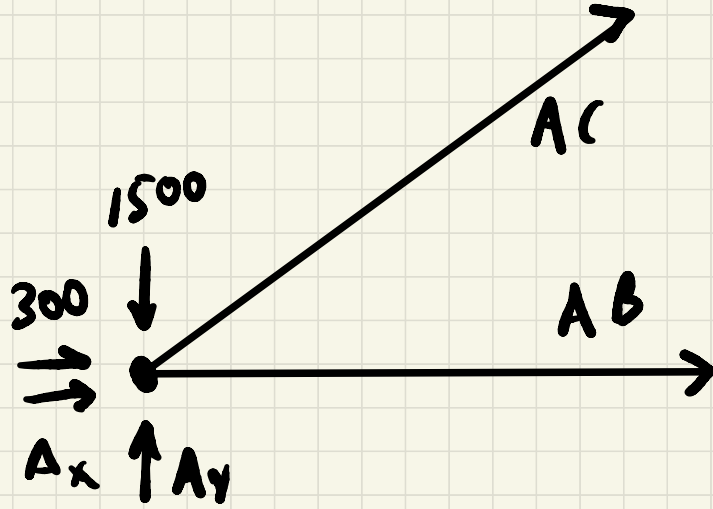


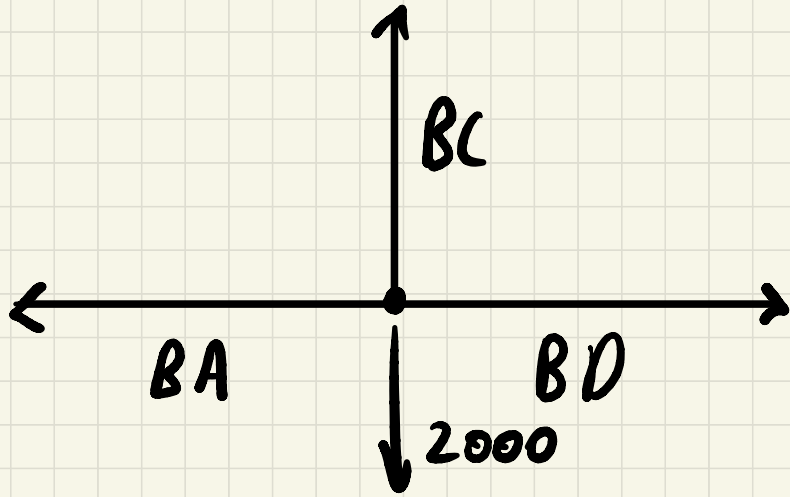
Raid Ahmed

Problem 3 Truss joint calculations!



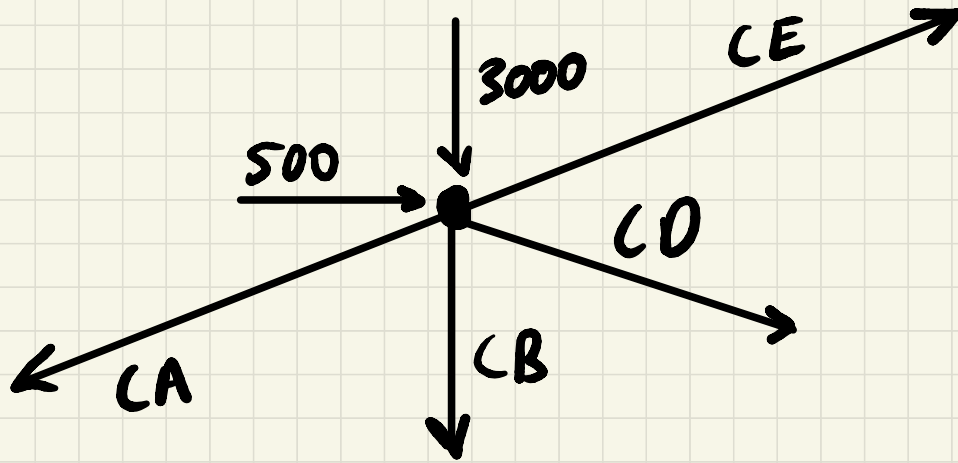
$$\sum F_x: 0 = AB + A_x + AC \cos(30) + 300$$

$$\sum F_y: 0 = A_y + AC \sin(30) - 1500$$



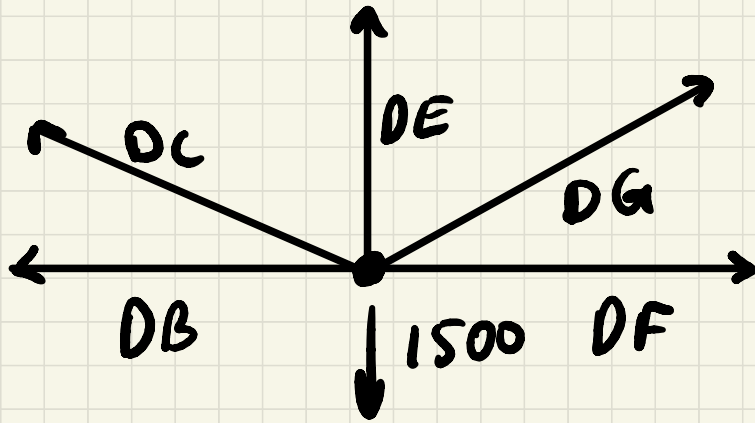
$$\sum F_x; O = -BA + BD$$

$$\sum F_y; O = BC - 2000$$



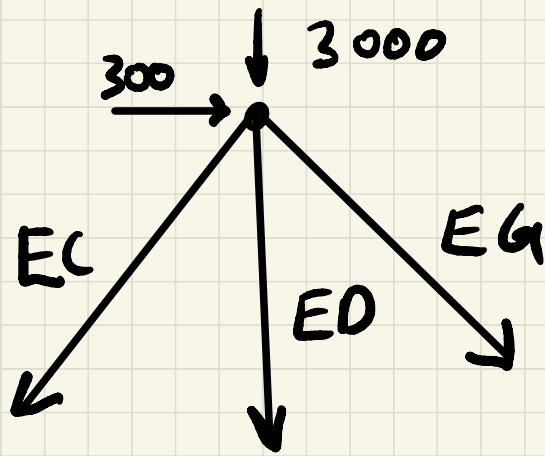
$$\sum F_x: 0 = -(A \cos(30)) + (C_D \cos(30)) + (C_E \cos(30)) + 500$$

$$\sum F_y: 0 = -(A \sin(30)) - C_B - (C_D \sin(30)) + (C_E \sin(30)) - 3000$$



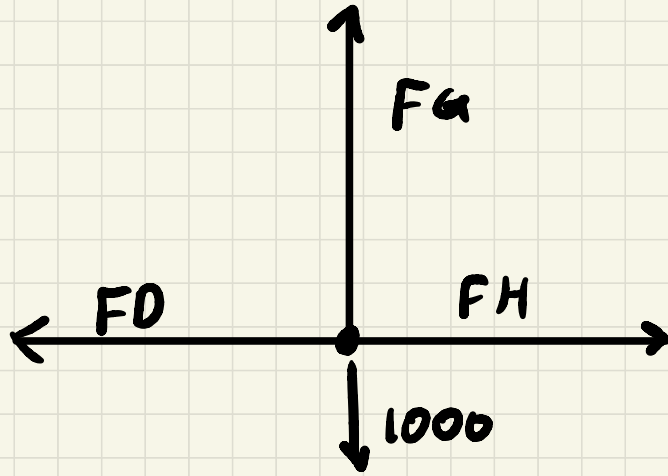
$$\sum F_x: 0 = -DB - DC \cos(30) + DG \cos(30) + DF$$

$$\sum F_y: 0 = DC \sin(30) + DE + DG \sin(30) - 1500$$



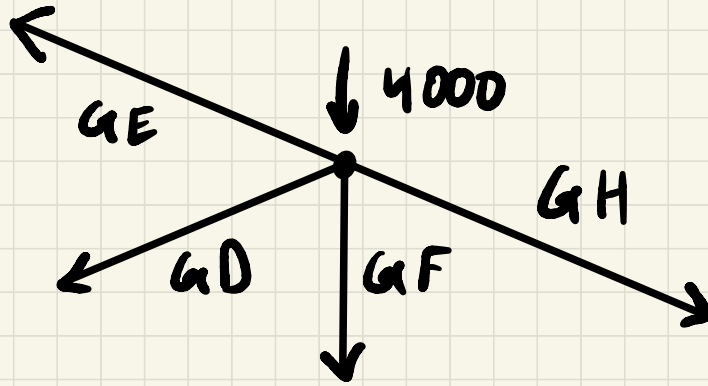
$$\Sigma F_x: 0 = -E_C \cos(30) + E_G \cos(30) + 300$$

$$\Sigma F_y: 0 = -E_D - E_G \sin(30^\circ) - E_C \sin(30^\circ) - 3000$$



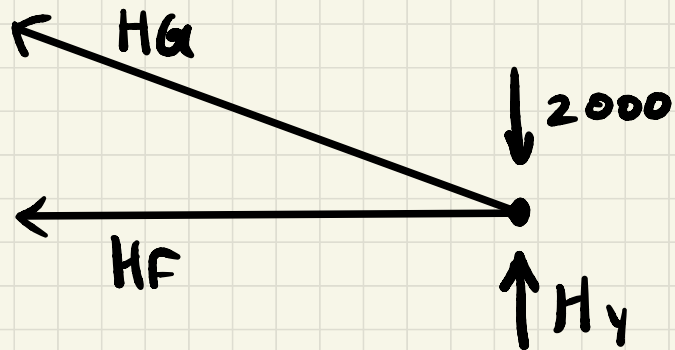
$$\sum F_x: 0 = -F_D + F_H$$

$$\sum F_y: 0 = F_G - 1000$$



$$\sum F_x: 0 = -G_E \cos(30) - G_D \cos(30) + G_H \cos(30)$$

$$\sum F_y: 0 = G_E \sin(30) - G_D \sin(30) - G_F - G_H \sin(30) - 4000$$



$$\sum F_x: 0 = -H_F - H_G \cos(30)$$

$$\sum F_y: 0 = H_y + H_G \sin(30) - 2000$$