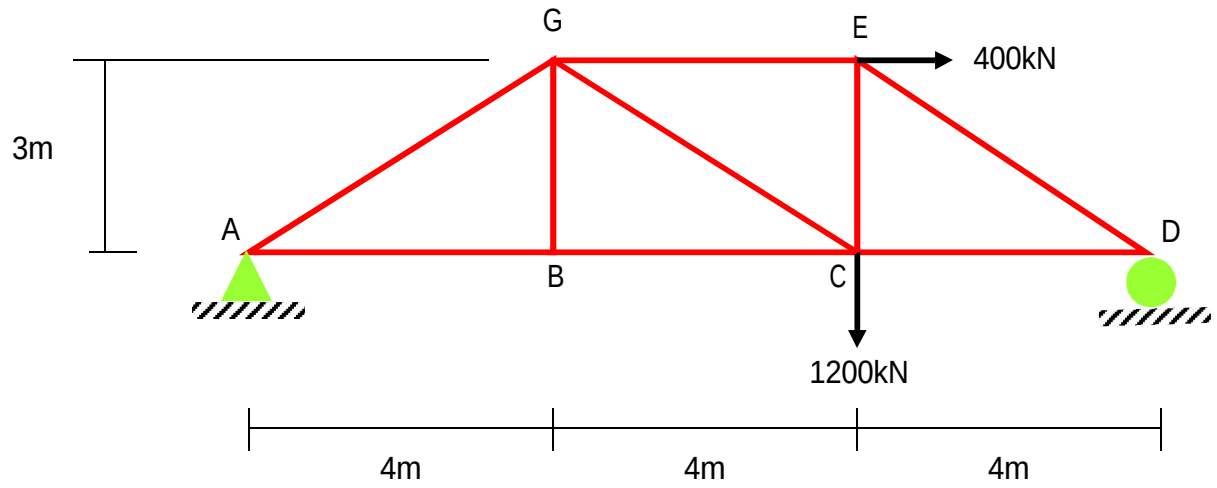
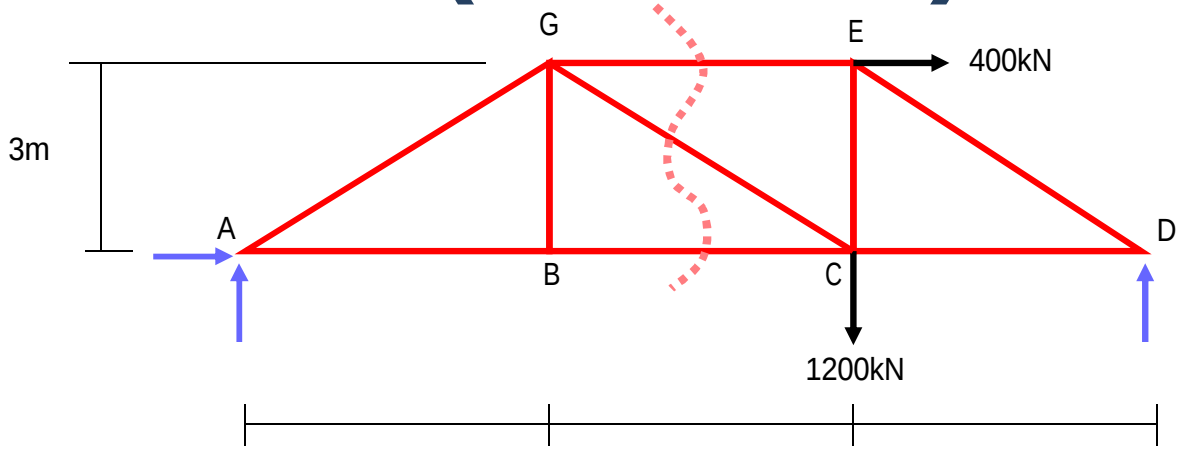
EXERCISE

Determine the force in members GE,GC and BC for the truss shown below



EXERCISE (SOLUTION)



$$\sum M_A = 0,$$

$$-R_D(12) + 1200(8) + 400(3) = 0$$

$$\therefore R_D = 900 \; kN$$

$$\sum Fy = 0,$$

$$R_A + R_D - 1200 = 0$$

$$R_A = 1200 - 900$$

$$\therefore R_A = 300 \; kN$$

$$\sum Fx = 0,$$

$$H_A + 400 = 0$$

$$H_A = -400 \; kN$$

EXERCISE (SOLUTION)

$$\sum M_G = 0,$$

$$300\,(4) - (-400 \times 3) - F_{BC}\,(3) = 0$$

$$F_{BC} = 800\,kN$$

$$\sum Fy = 0,$$

$$300 - F_{GC}\,(3/5) = 0$$

$$F_{GC} = 500\,kN$$

$$\sum M_C = 0,$$

$$F_{GE}\,(3) + 300\,(8) = 0$$

$$F_{GE} = -800\,kN$$