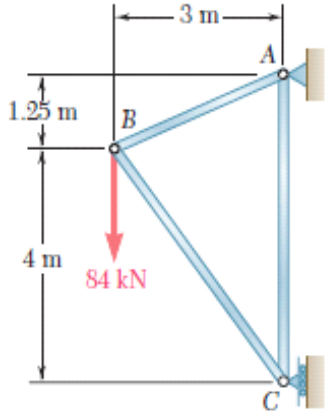
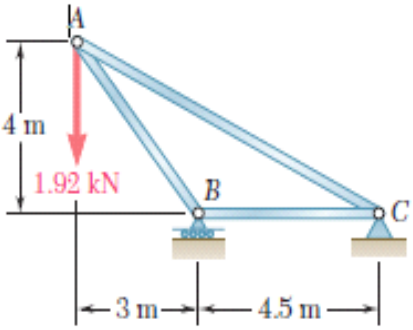
Tutorial sheet 4

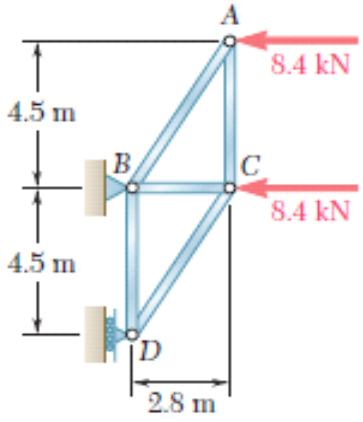
1. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[R_c=48 KN, A_y=84 KN, A_x=48 KN]**
   [AB=52 KN (T), AC=64 KN (T), BC=80 KN (C)]



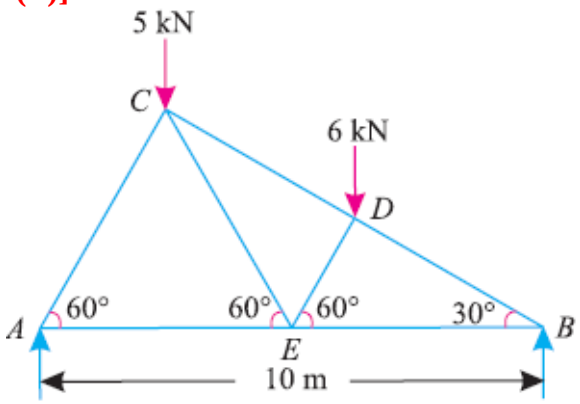
2. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[C_X=0, C_Y=1.28 KN, R_B=3.2 KN]**
   [AB=4 KN (C), BC=2.4 KN (C), AC=2.72 KN (T)]



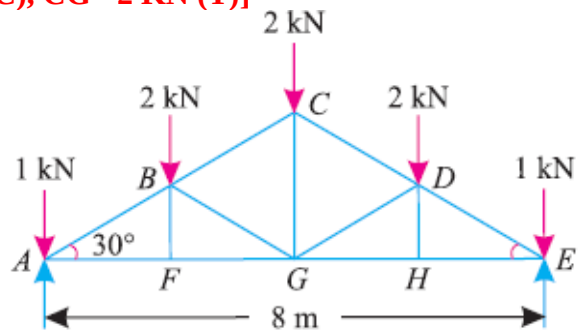
3. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[R_D=8.4 KN, B_X=25.2 KN, B_Y=0]**
   [AB=15.9 KN (C), AC=13.5 KN (T), CD=15.9 KN (T), BC=16.8 KN (C), BD=13.5 KN (C)]



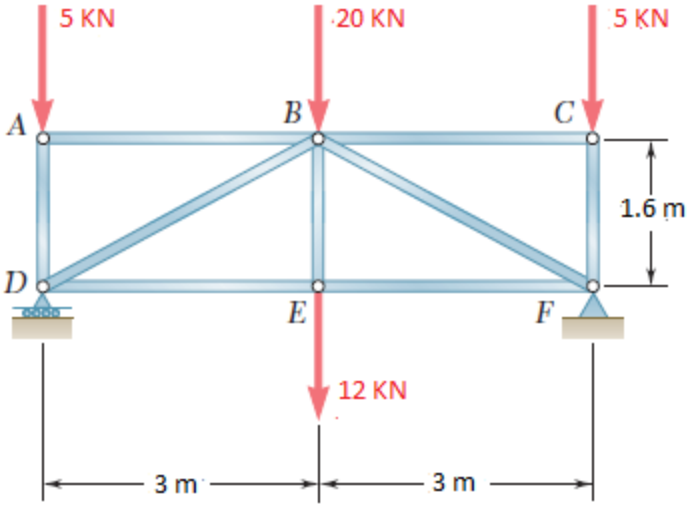
4. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[AC=6.92 KN (C), AE=3.46 KN (T), BD=10 KN (C), BE=8.66 KN (T), CD=7 KN (C), ED=5.2 KN (C), CE=5.2 KN (T)]**



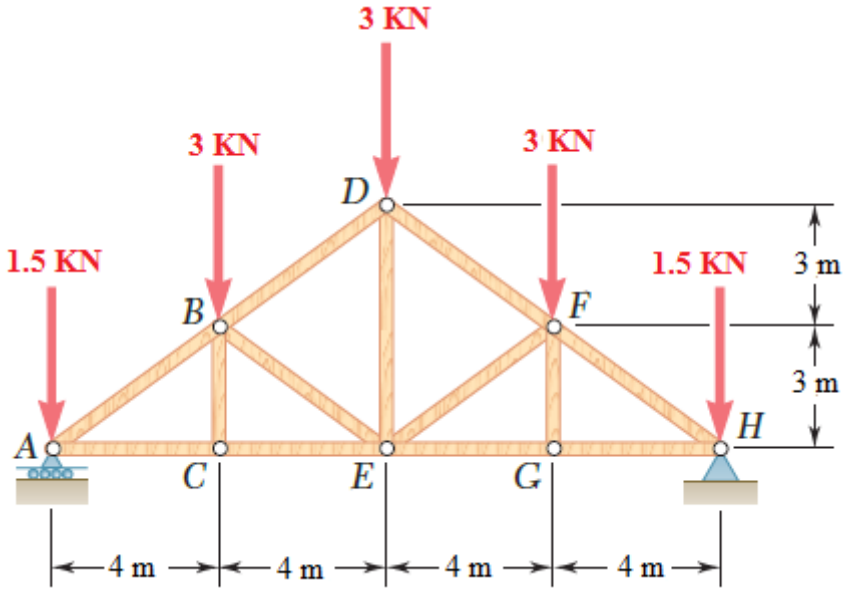
5. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[AC=DE= 6 KN (C), AF=EH=5.2 KN (T), FG=GH=5.2 KN (T), BF=DH=0, BG=DG= 2 KN (C), BC=CD= 4 KN (C), CG= 2 KN (T)]**



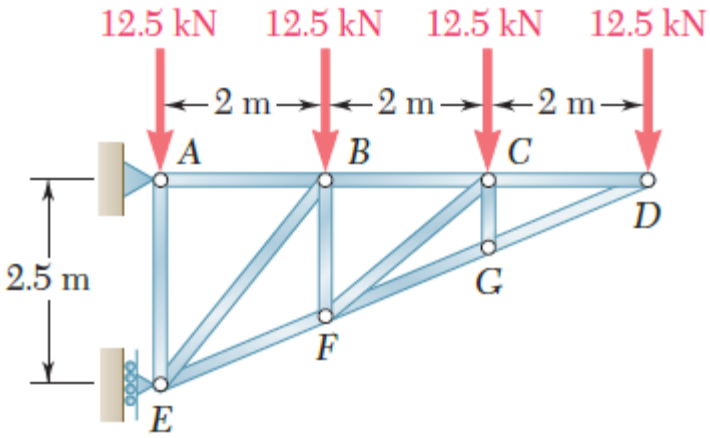
6. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[F_X=0, F_Y= 21 KN, R_D= 21 KN]**
[AB=0, AD=5 KN (C), BD= 34 KN (C), DE= 30 KN (T), BE= 12 KN (T)]



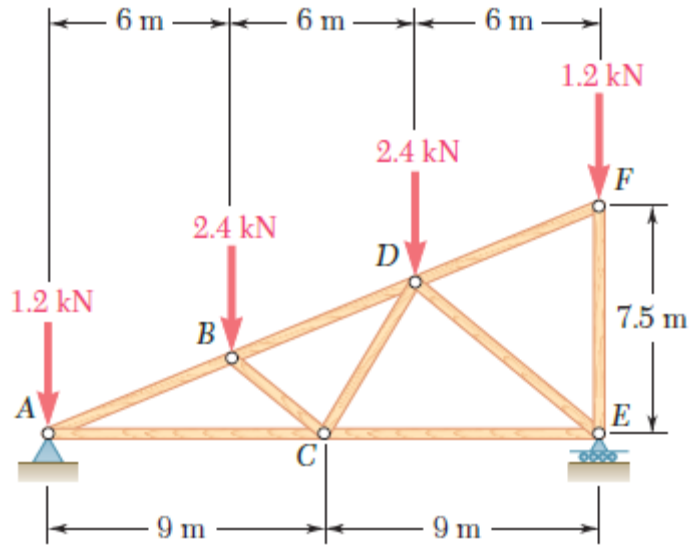
7. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[R_A=6 KN, H_Y= 6 KN, H_X=0]**
[AB=7.5 KN (C), AC=6 KN (T), CE= 6 KN (T), BD= 5 KN (C), BE=2.5 KN (C), DF= 5 KN (C), DE= 3KN (T), EF=2.5 KN (C), EG= 6 KN (T), EG=0, FH= 7.5 KN (C), GH= 6 KN (T)]



8. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[CD=30 KN (T), DG=32.5 KN (C),CG=0, FG=32.5 KN (C), CF=19.53 KN (C), BC=45 KN (T), EF=48.8 KN (C), BF=6.25 KN (T), BE= 24 KN (C), AB= 60 KN (T), AE=37.5 KN (T)]**



9. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[A_X=0, A_Y=R_E= 3.6 KN]**
[DF=0, EF= 1.2 KN (C), AB= 6.24 KN (C), AC= 2.76 KN (T), BD= 4.16 KN (C), BD= 2.5 KN (C), CD= 1.867 KN (T), CE= 2.88 KN (T), DE= 3.75 KN (C)]



10. Determine the force in each member of the truss shown. State whether each member is in tension or compression **[A_X= 0, A_Y= R_G= 30 KN]**
[AB= 37.5 KN (C), AC= 22.5 KN (T), BC= 37.5 KN (T), BD= 45 KN (C), CD=0, CE= 45 KN (T)]