30 kN

5 4 3

B

2 m   4 m

C

Determine the reactions at pin A:

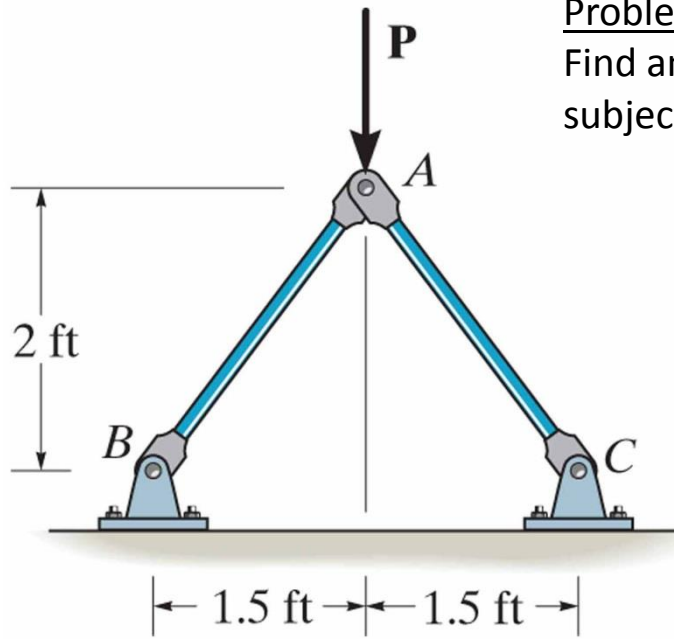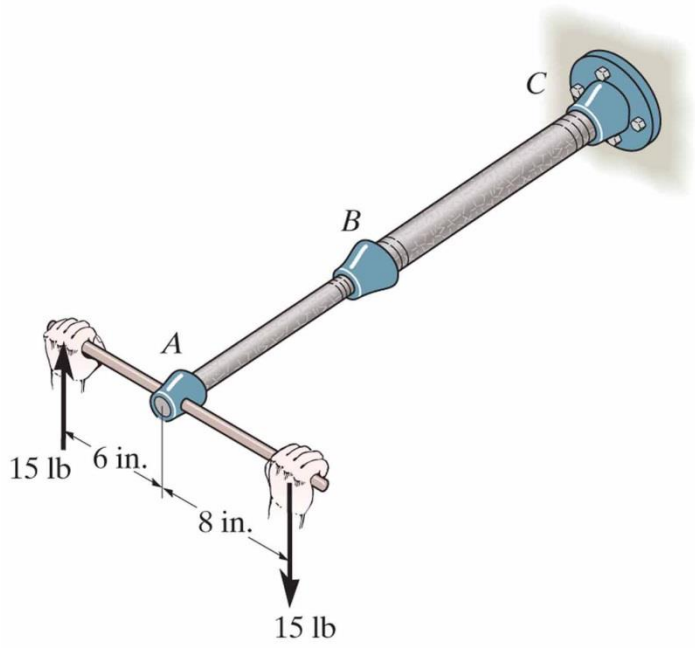Determine the shear stress at pin A, that has diameter d = 20mm:
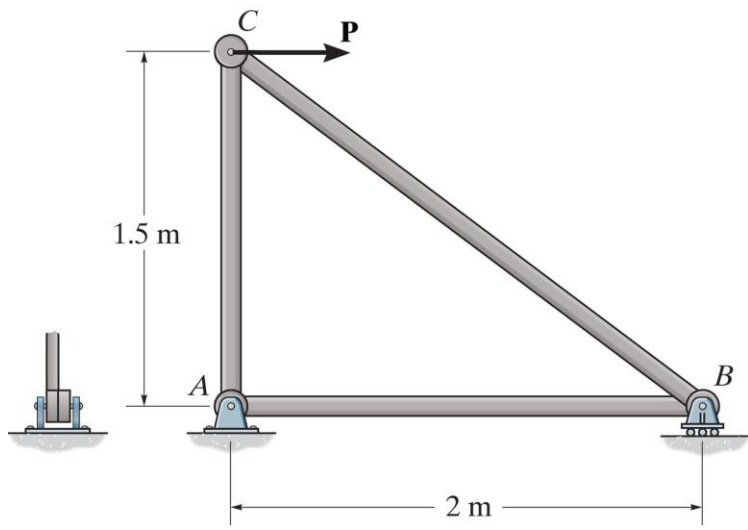
Problem 2:

Determine the average shear stress developed in pin A of the truss. Use P=40 kN. The pin has a diameter of 25 mm.
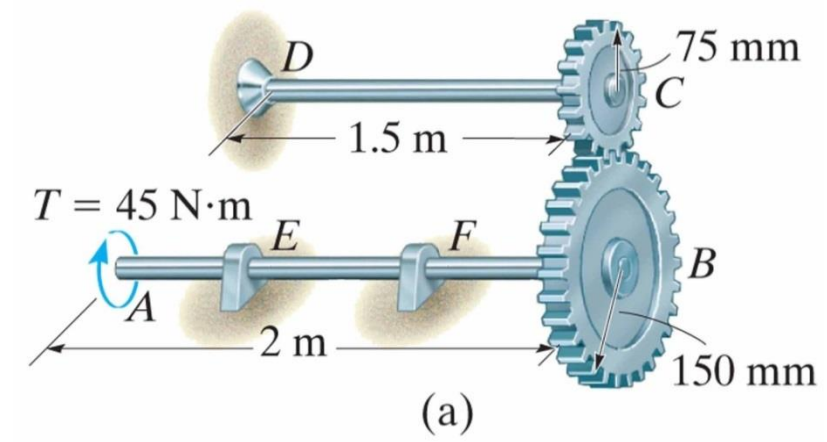
Problem 3:

Find an expression for the vertical displacement δ_A when the load P is applied and rods AB and AC are subject to a change in temperature $\Delta T > 0$.

C

B

A

15 lb   6 in.

8 in.

15 lb

Problem 4:
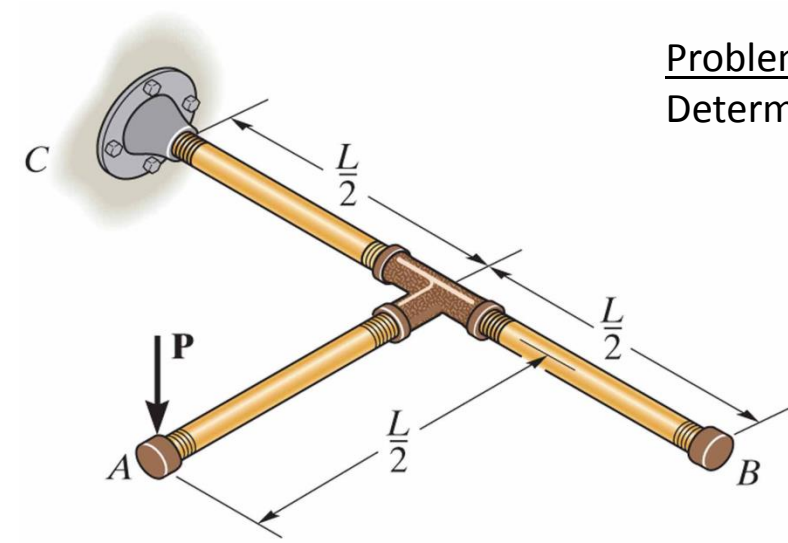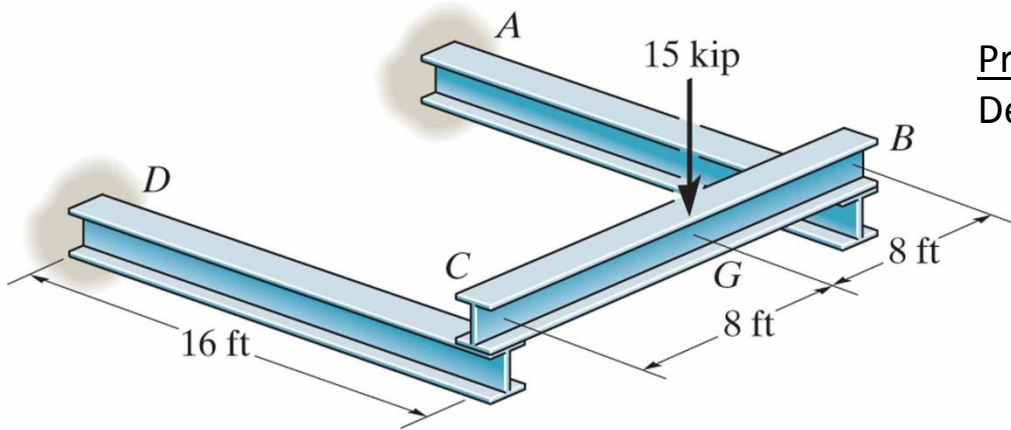For the load applied, find the state of stress at point H. Also, determine the reaction at C.

(a)

Problem 5:

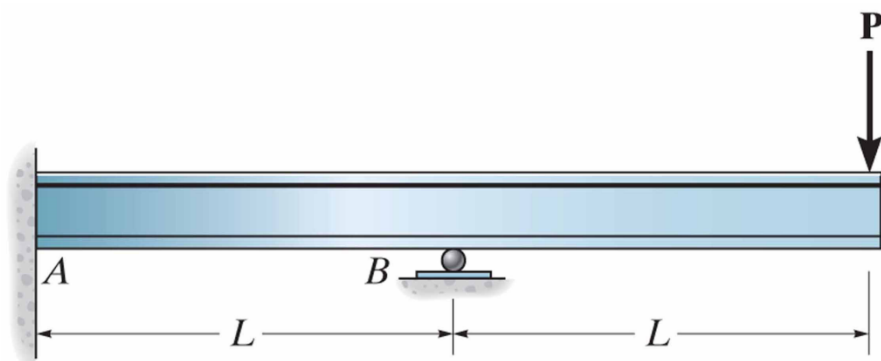Determine the twist angle of the cross section at A.

Problem 6:
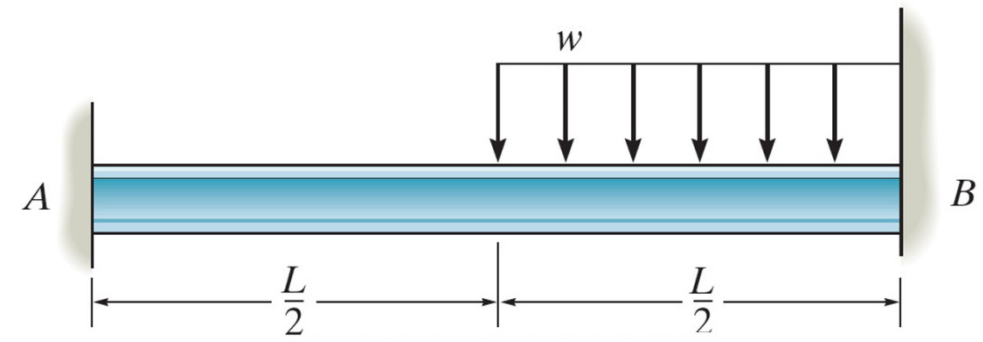Determine the vertical displacement of the cross section A. Use deflection table.

Problem 7:
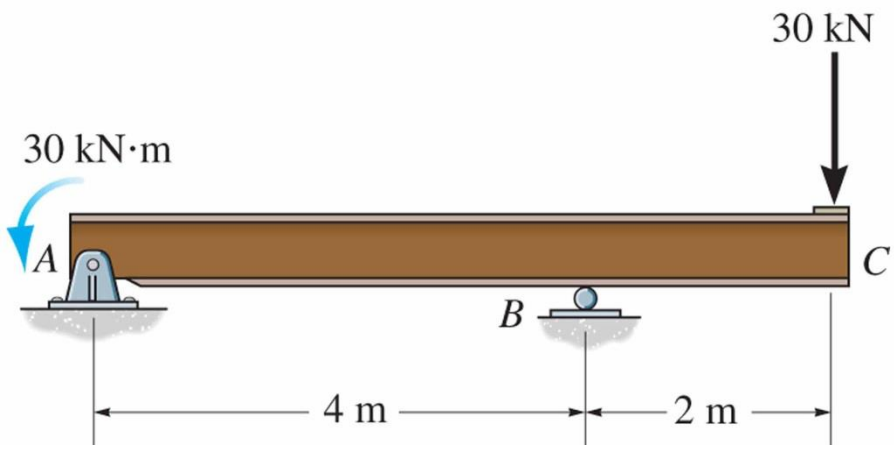Determine the vertical displacement of the cross section G. Use deflection table.

P

A

B

L

L

Problem 8:
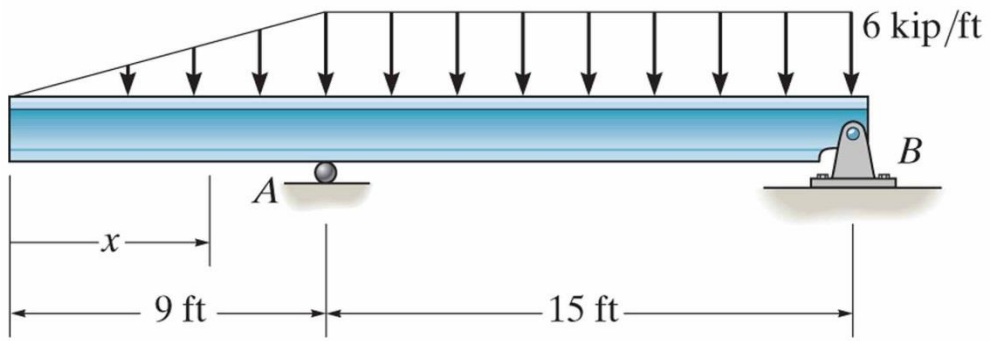Determine the reactions at A and B. Use deflection table.

Problem 9:
Determine the reactions at A and B. Use deflection table.

30 kN
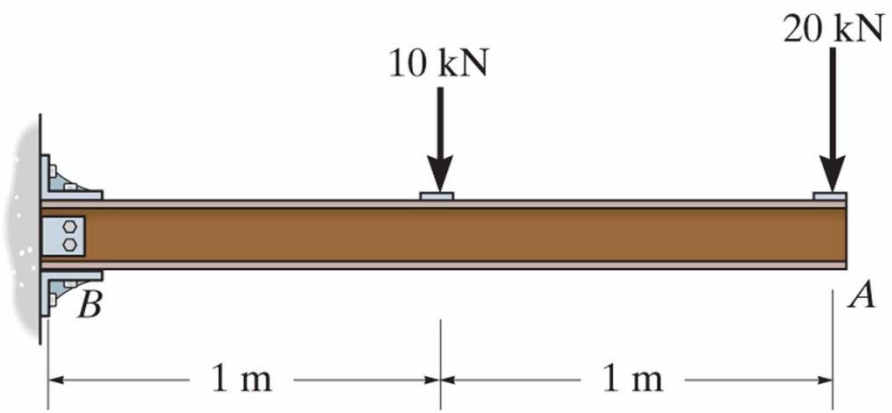
30 kN·m

A

B

C

4 m

2 m

Obtain expressions for the deflection from 0<x<4 and 4<x<6

Problem 11:
Obtain expressions for the deflection from 0<x<9 and 9<x<15

10 kN

20 kN

B

A

1 m

1 m

Problem 12:
Obtain expressions for the deflection from 0<x<1 and 1<x<2 using ODE. Verify your results by confirming the displacement at A using the superposition method and the deflection table.