

FE 1

Problem 3-7 :

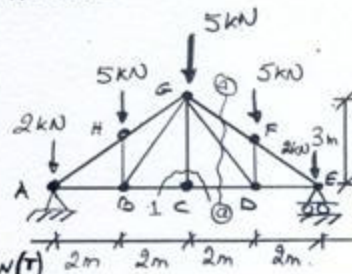
HOWE TRUSS - F_{GF} , F_{CD} , F_{GC} ? + Others

$R_A = 9.5 \text{ kN} = R_E (\uparrow)$ Symmetry

$F_{GC} = 0$ (ϕ Face member; joint C)

$F_{GF} = 12.5 \text{ kN (Comp)}$

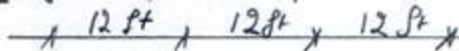
$F_{CD} = 6.67 \text{ kN (Tension)}$



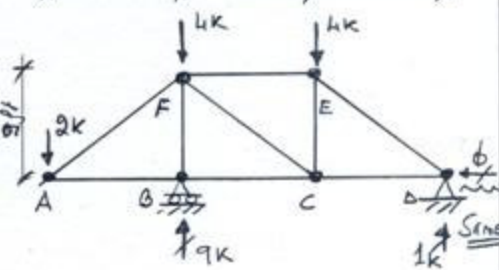
$F_{FD} = 5 \text{ kN (C)}$; $F_{FE} = 12.5 \text{ kN (C)}$; $F_{GD} = 6 \text{ kN (T)}$
 $F_{ED} = 10 \text{ kN (T)}$

Problem 3-10 : (Not graded/required; from Old edition)

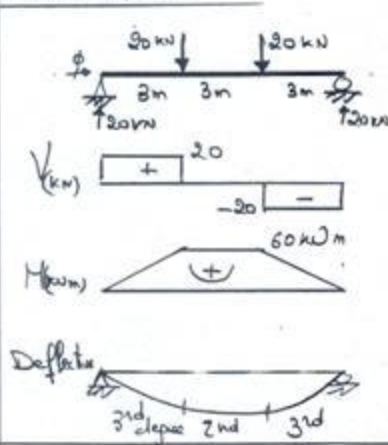
Solution :



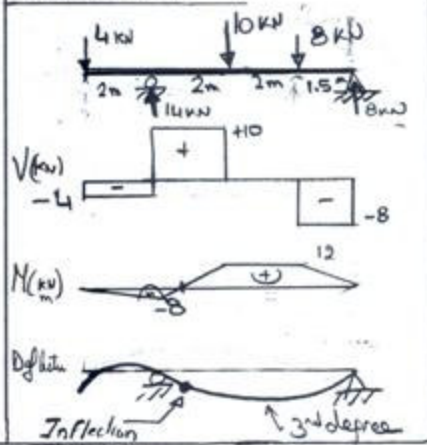
$F_{AF} = 3.34 \text{ k (T)}$	$F_{AB} = 2.67 \text{ k (C)}$
$F_{BF} = 9 \text{ k (C)}$	$F_{BC} = 9.67 \text{ k (C)}$
$F_{FC} = 5 \text{ k (T)}$	$F_{FE} = 1.33 \text{ k (C)}$
$F_{CE} = 3 \text{ k (C)}$	$F_{CD} = 1.33 \text{ k (T)}$
$F_{ED} = 1.67 \text{ k (C)}$	-



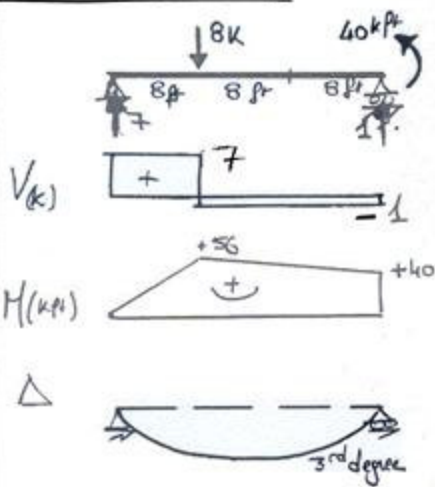
Problem 4-12 :



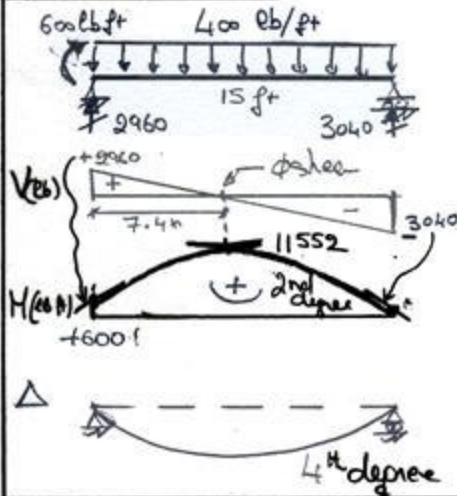
Problem 4-1 :



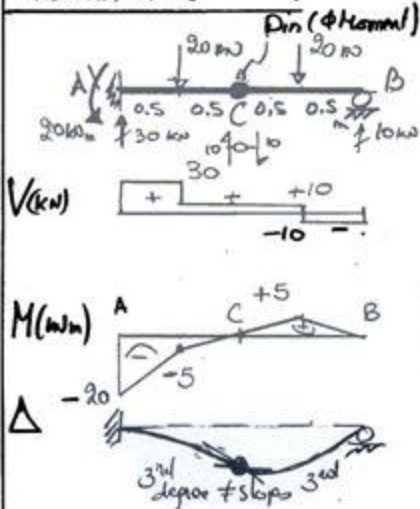
Problem 4-2 :



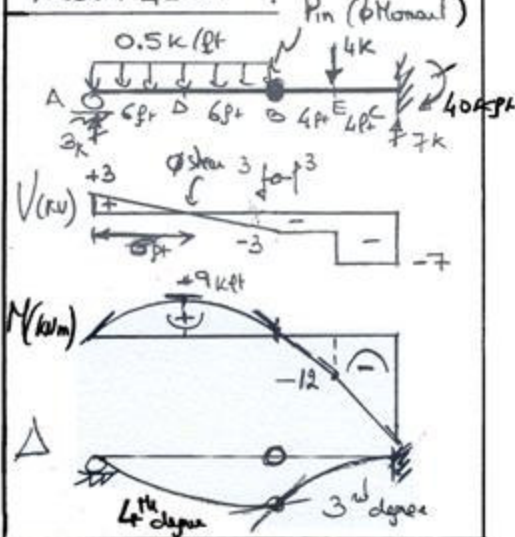
Problem 4-21:



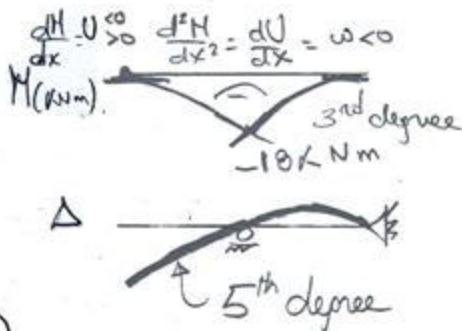
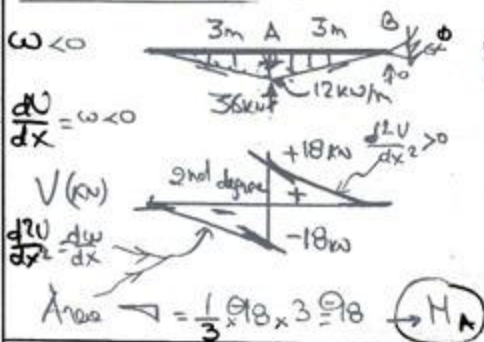
Problem 4-16 :



Problem 4-36 :



Problem 4-39 :



$w < 0$
 $\frac{dV}{dx} = w < 0$

$\frac{d^2V}{dx^2} = \frac{dw}{dx}$

Area $\triangle = \frac{1}{3} \times 18 \times 3 = 18 \rightarrow H_A$

$\frac{d^2M}{dx^2} = \frac{dV}{dx} = w < 0$
 $\frac{d^3M}{dx^3} = \frac{dw}{dx}$

Problem 4-40 :

