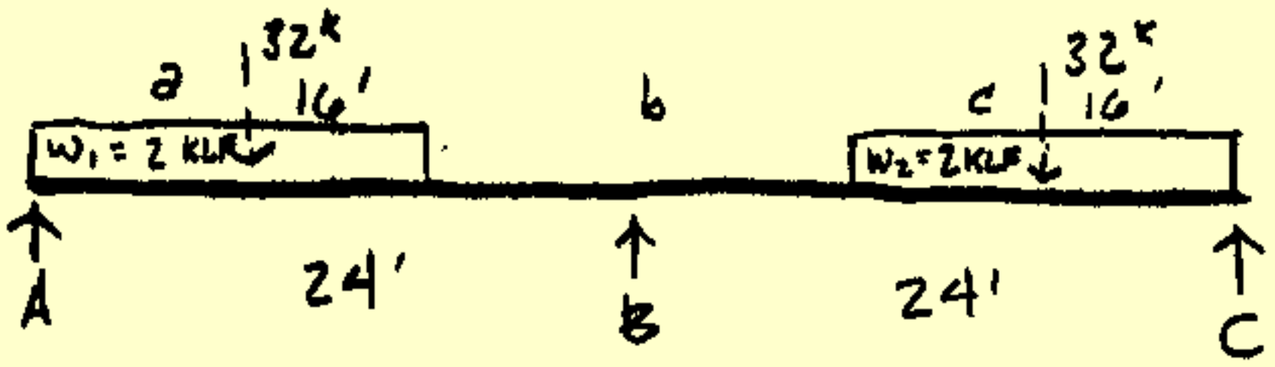
open.michigan

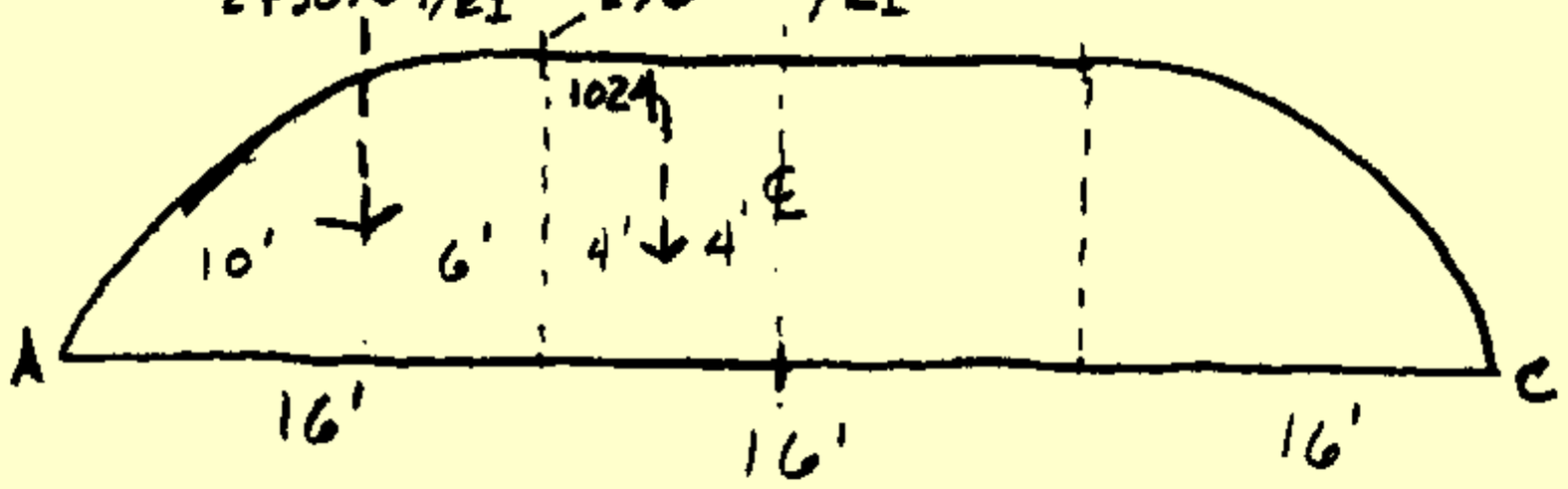
SOLVE BY DEFLECTION METHOD



CHOOSE B AS REDUNDANT

WITH B REMOVED;
SOLVE FOR δ_B BY SECOND MOMENT AREA METHOD

M/EI DIAGRAM



$$\Sigma M_{@A} = 0 = -M_A + \frac{2730(10)}{EI} + \frac{1024(20)}{EI}$$

$$M_A = \frac{47786.67}{EI} = \Delta_{℄} \text{ FT-}\frac{K}{K}$$

WITH B AS LOAD:
SOLVE WITH EQUATION IN D-25

$$\Delta_{℄} = \frac{PL^3}{48EI} = \frac{P\,48^3}{48EI} = \frac{47786.67}{EI}$$

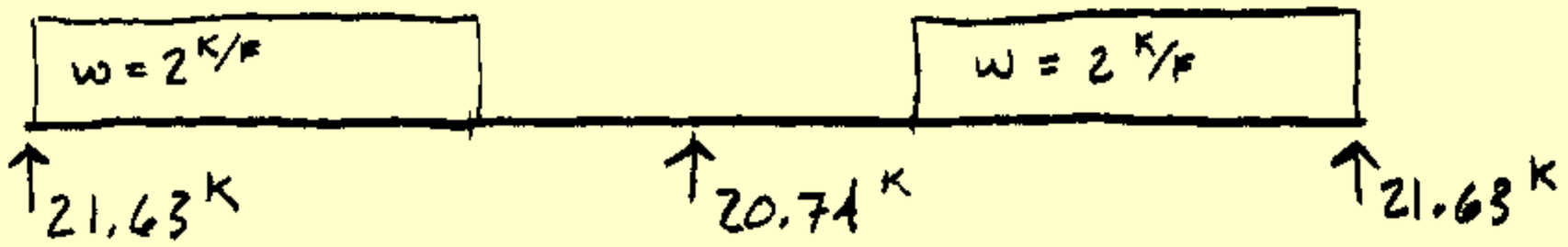
$$P = 20.74^K$$

BY SYMMETRY:

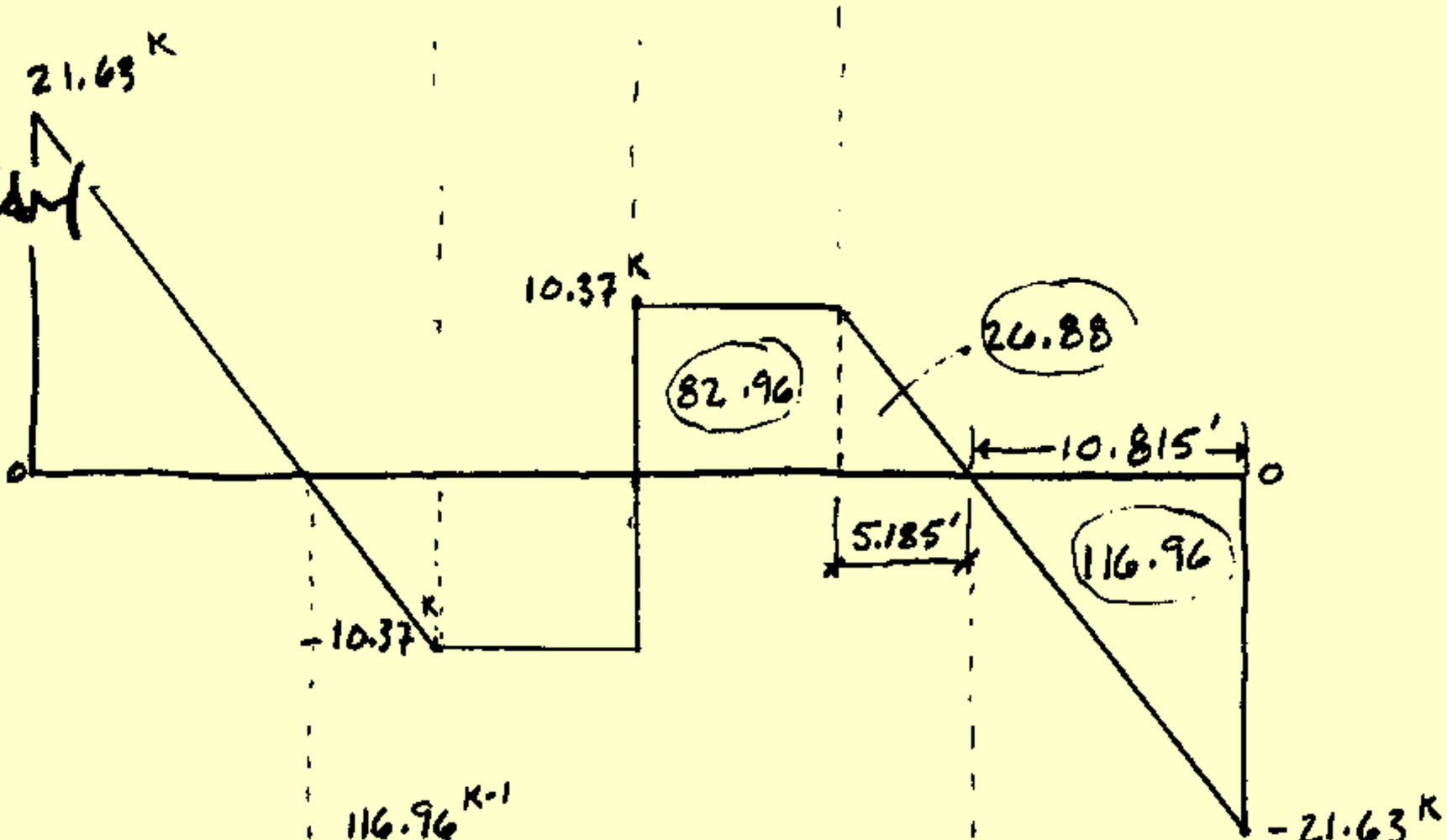
$$A+C = 64 - 20.74 = 43.26$$

$$A = C = 21.63^K$$

LOAD DIAGRAM



SHEAR DIAGRAM



MOMENT DIAGRAM