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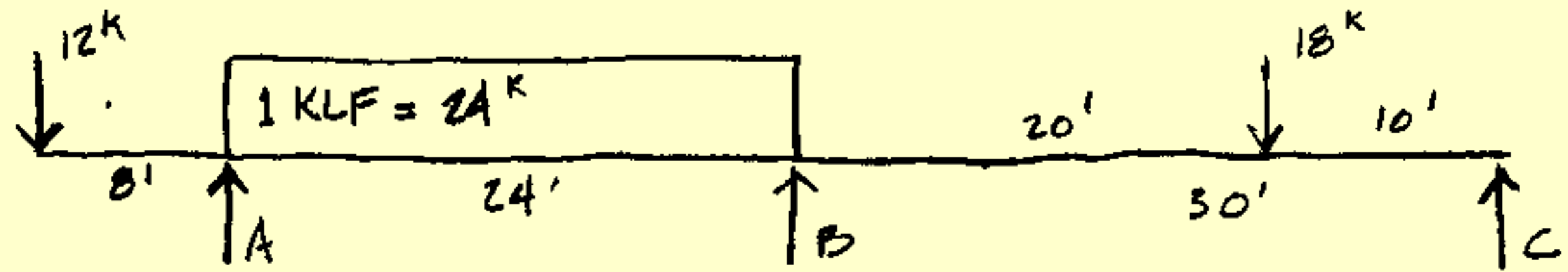
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REQ'D

USE 3-MOMENT EQUATION TO SOLVE BEAM REACTIONS.



3-MOMENT EQUATION:

$$M_A L_1 + 2M_B(L_1 + L_2) + M_C L_2 = 6 [EI\theta_1 + EI\theta_2]$$

$$M_A = 12(8) = 96 \text{ k'}$$

$$M_B = ? \text{ (FIND)}$$

$$M_C = 0 \text{ (UNREST. END)}$$

$$L_1 = 24$$

$$L_2 = 30$$

$$L_1 + L_2 = 54'$$

$$EI\theta_1 = \frac{W L^3}{24} = \frac{24(24)^3}{24} = 576$$

$$EI\theta_2 = \frac{4 P L^2}{81} = \frac{4(18)(30)^2}{81} = 800$$

$$[EI\theta_1 + EI\theta_2] = 576 + 800 = 1376$$

$$\rightarrow 96(24) + 2(M_B)(54) + 0(30) = 6[1376]$$

$$M_B = 55.111 \text{ k'}$$

REACTIONS BY SUPERPOSITION

