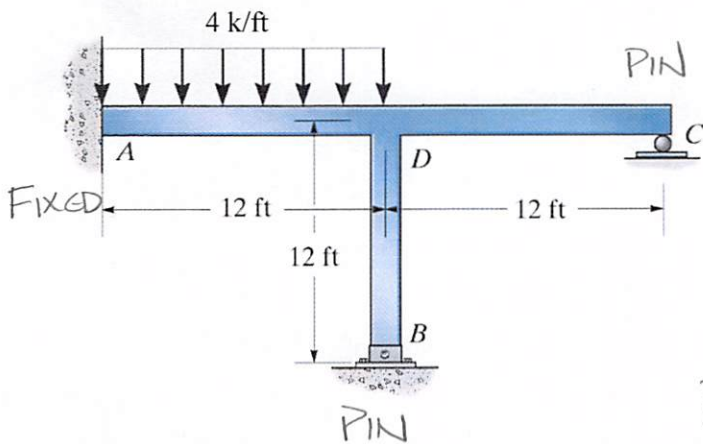


Determine the moments at the fixed support A and joint D, then draw the moment diagram for the frame. Assume B is pinned.



$$FEM_{AD} = \frac{WL^2}{12} = \frac{4 \text{ k/ft} (12 \text{ ft})^2}{12} = \pm 48 \text{ kft}$$

$$K_{DA} = \frac{4EI}{12'}, \quad K_{DC} = \frac{3EI}{12'}, \quad K_{DB} = \frac{3EI}{12}$$

$$DF_{DA} = \frac{1/3}{1/3 + 1/4 + 1/4} = 0.4$$

$$DF_{DB} = \frac{1/4}{1/3 + 1/4 + 1/4} = 0.3 \quad DF_{DC} = 0.3$$

JOINT	A	D			C	B
MEMBER	AD	DA	DB	DC	CD	BD
DF	0	0.4	0.3	0.3	1	1
FEM	-48	48				
DIST.		-19.2	-14.4	-14.4		
CO	-9.60					
DIST.						
$\Sigma (kft)$	-57.6	28.8	-14.4	-14.4	0	0