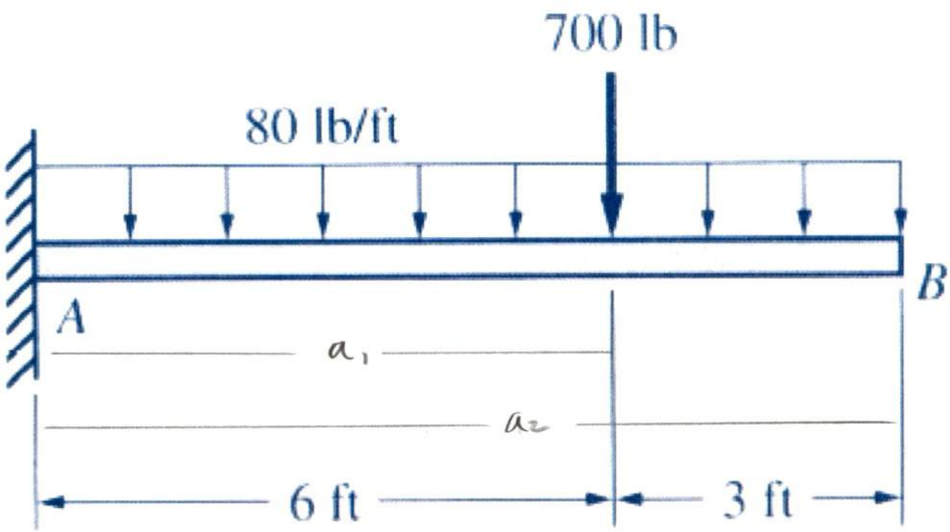


Solution,

From Table 13-1 and use the Method of Superposition

case 5. Cantelever beam with a concentrated load at any point

case 6. Cantelever beam with a uniform load

$$V_{MAX} = -P + -wa_2 = -700\text{ lb} + -\frac{80\text{ lb}}{\text{ft}}(9\text{ ft})$$

$$= -700\text{ lb} - 720\text{ lb}$$

$$= \underline{\underline{-1420\text{ lb}}}$$

$$M_{MAX} = -Pa_1 + -\frac{wa_2^2}{2}$$

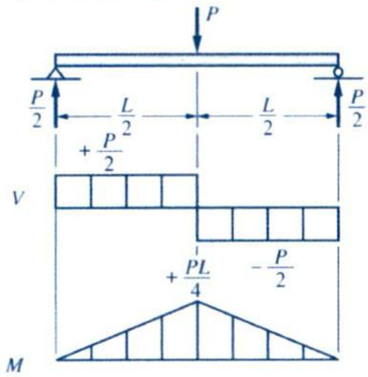
$$= -700\text{ lb}(6\text{ ft}) + -\frac{\frac{80\text{ lb}}{\text{ft}}(9\text{ ft})^2}{2}$$

$$= -4200\text{ lb}\cdot\text{ft} - 3240\text{ lb}\cdot\text{ft}$$

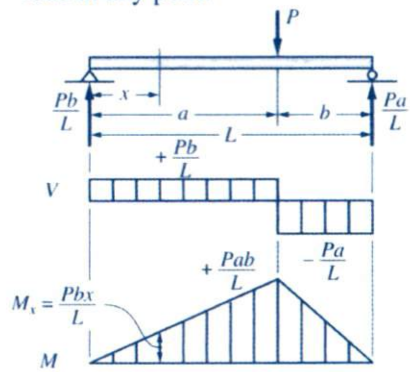
$$= \underline{\underline{-7440\text{ lb}\cdot\text{ft}}}$$

TABLE 13–1 Shear and Moment Formulas for Some Simple Loadings

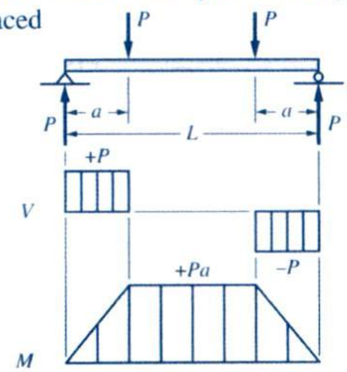
1. Simple beam with a concentrated load at the center



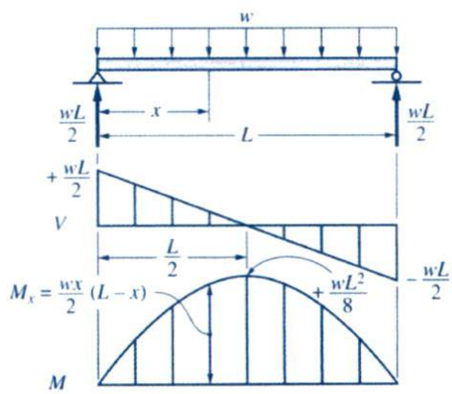
2. Simple beam with a concentrated load at any point



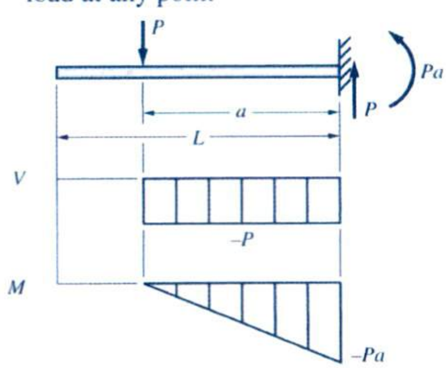
3. Simple beam with two equal concentrated loads symmetrically placed



4. Simple beam with a uniform load



5. Cantilever beam with a concentrated load at any point



6. Cantilever beam with a uniform load