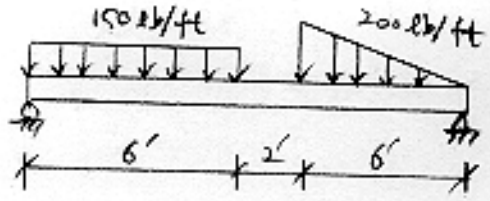
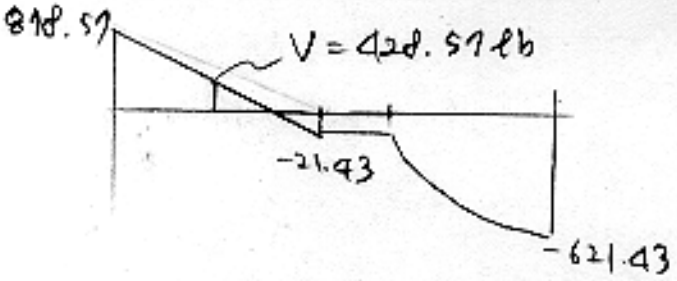
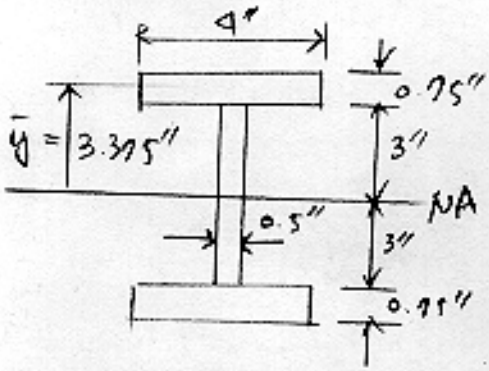
7-25

Shear Force





Section Properties



$$I = \frac{1}{12}(4)(1.5^3) - \frac{1}{12}(3.5)(6^3)$$

$$= 11.625 \text{ (in}^4\text{)}$$

$$Q_c = \Sigma \bar{y}_i A_i = 3.375(4)(0.75)$$

$$= 10.125 \text{ (in}^3\text{)}$$

Shear stress

$$\tau_B = \tau_c = \frac{VQ_c}{I \cdot t} = \frac{428.57(10.125)}{11.625(0.5)}$$

$$= \underline{112 \text{ psi}}$$