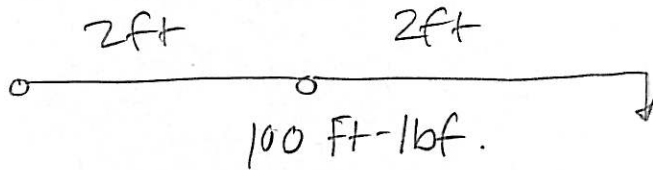


EFFECTIVE STIFFNESS

$$= \frac{L}{x}$$



100 ft-lbf

$$T = Fd$$

$$50 \text{ lb} \cdot \frac{100}{50} = 2$$

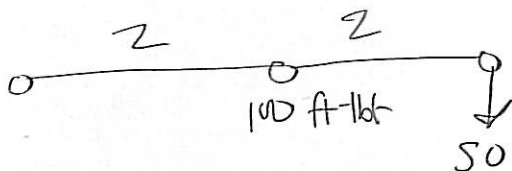


$$T = 200 \text{ ft-lbf}$$

$$\text{Effective stiffness} = \frac{4}{2} = 2$$

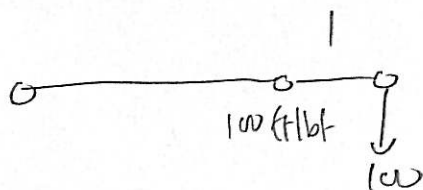
TORQUE TRANSFERRED = RATIO OF FULCRUM POINTS

$$\text{TORQUE @ SOCKET} \times \frac{\text{STIFFNESS}}{\text{RATIO}} = \text{TORQUE @ RATCHES}$$



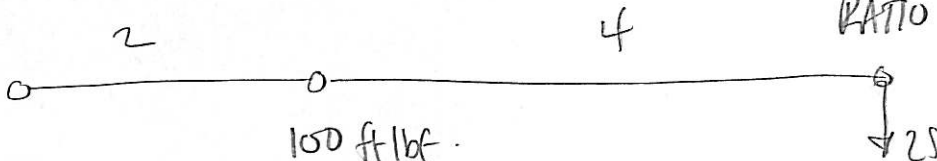
$$\text{RATIO} = \frac{4}{2}$$

$$T = 2 \times 100 = 200$$



$$\text{RATIO} = \frac{3}{1}$$

$$T = 3 \times 100 = 300$$



$$\text{RATIO} = \frac{6}{4}$$

$$T = 1.5 \times 100 = 150$$

$$25 \times 6 = 150$$