Print your last name, first initial, LEGIBLY, so it can be read from the bottom of the page, as shown in SEAT #106.
STATICS
\[ \sum M_D = 0 = +30 \text{ kft} + 20 \text{ k}(20') + 10 \text{ k}(9') + 13.5 \text{ k}(6') \]

\[ M_D = 30 + 20(20) + 10(9) + 13.5(6) \]

\[ M_{max} = 20k(10') \]
LOAD  
SHEAR  
MOMENT  
SLOPE OF BEAM  
DEFLECTION

\[ \begin{align*}
\text{AREA} &= \frac{bh}{2} \\
\text{CENTROID} &= \frac{b}{3} \\
\text{SLOPE} &= \frac{b}{4} \\
\text{DEFLECTION} &= \frac{b}{5}
\end{align*} \]
Determine the maximum bending moment which can be placed on the beam shown about the horizontal neutral axis if the maximum stress is not to exceed 30 ksi. Even numbered seats do the left beam. Odd numbered seats do the right beam.

\[ \sigma = \frac{Mc}{I}, \quad I = \sum \left[ \frac{(bh^3)}{12} + Ad^2 \right] \]

If you are unable to locate the neutral axis you can assume it is 7 inches from the bottom at a penalty of 2 points.