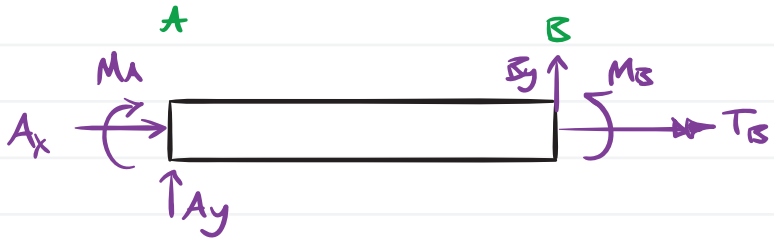
3D Deflection

1. FBD of AB



$y_1 = \frac{B_y(6)^3}{3EI_{AB}}$ (Due to B_y) Also, $B_y = F_y$

$y_2 = \frac{M_B(6)^2}{2EI_{AB}}$ (Due to M_B) Also, $M_B = 2F_y$

2. Angular displacement at B.

$\phi = \frac{T_B L}{JG} = \frac{T_B(6)}{(0.09818)(11.5\cdot 10^6)}$, where $T_B = 5F_y$.

$y_3 = 5\phi$

3. $y_4 = \frac{F_y(2)^3}{3EI_{CD}}$

4. Slope at B: