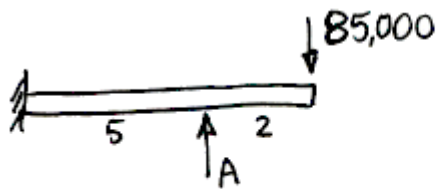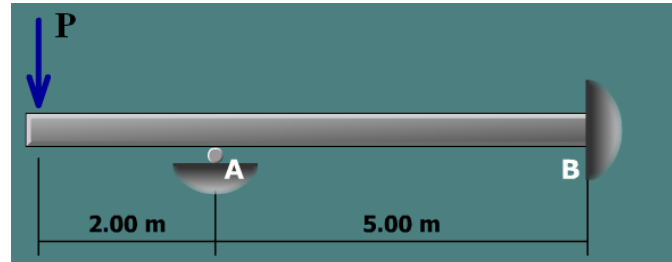A concentrated load of P = 85 kN is applied to the propped cantilever beam shown below. Assuming that EI is constant for the beam, determine the magnitude of the reaction force acting at A.

Show work clearly and write your answer in the box at the bottom of the page.

$$Y_A = \frac{-85{,}000 \, (5)^2}{6 \, EI} \left(3(7)-5 \right) + \frac{A \, (5)^3}{3EI} = 0$$

$$\Rightarrow A = 136{,}000 \, N$$