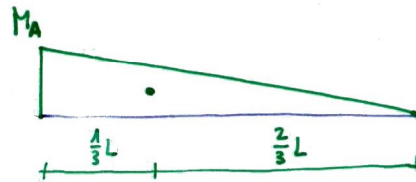
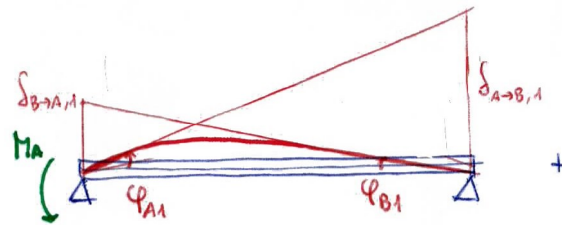


$$\varphi_A = 0 \Rightarrow |\varphi_{A1}| - |\varphi_{A2}| = 0 \Rightarrow \frac{M_A L}{3EI} - \frac{M_B L}{6EI} = 0 \Rightarrow \underline{M_B = 2M_A}$$

$$\varphi_B = 1 \Rightarrow -|\varphi_{B1}| + |\varphi_{B2}| = 1 \Rightarrow -\frac{M_A L}{6EI} + \frac{M_B L}{3EI} = 1 \Rightarrow$$

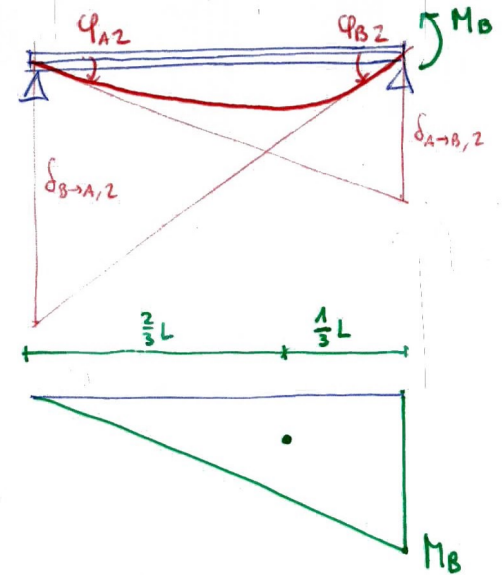
$$\Rightarrow \frac{L}{EI} \left( \frac{2M_A}{3} - \frac{M_A}{6} \right) = 1 \Rightarrow M_A \left( \frac{4}{6} - \frac{1}{6} \right) = \frac{EI}{L} \Rightarrow$$

$$\Rightarrow \boxed{\begin{array}{l} M_A = \frac{2EI}{L} \\ \downarrow \\ M_B = \frac{4EI}{L} \end{array}}$$



$$|\varphi_{A1}| = \frac{\delta_{A \rightarrow B,1}}{L} = \frac{S_{A \rightarrow B,1}}{EIL} = \frac{\left(\frac{1}{2} L M_A\right) \frac{2}{3} L}{EIL} = \frac{M_A L}{3EI}$$

$$|\varphi_{B1}| = \frac{\delta_{B \rightarrow A,1}}{L} = \frac{S_{B \rightarrow A,1}}{EIL} = \frac{\left(\frac{1}{2} L M_A\right) \frac{1}{3} L}{EIL} = \frac{M_A L}{6EI}$$



$$|\varphi_{A2}| = \frac{\delta_{A \rightarrow B,2}}{L} = \frac{S_{A \rightarrow B,2}}{EIL} = \frac{\left(\frac{1}{2} L M_B\right) \frac{1}{3} L}{EIL} = \frac{M_B L}{6EI}$$

$$|\varphi_{B2}| = \frac{\delta_{B \rightarrow A,2}}{L} = \frac{S_{B \rightarrow A,2}}{EIL} = \frac{\left(\frac{1}{2} L M_B\right) \frac{2}{3} L}{EIL} = \frac{M_B L}{3EI}$$