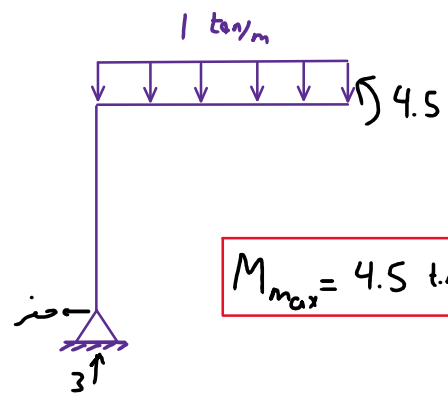
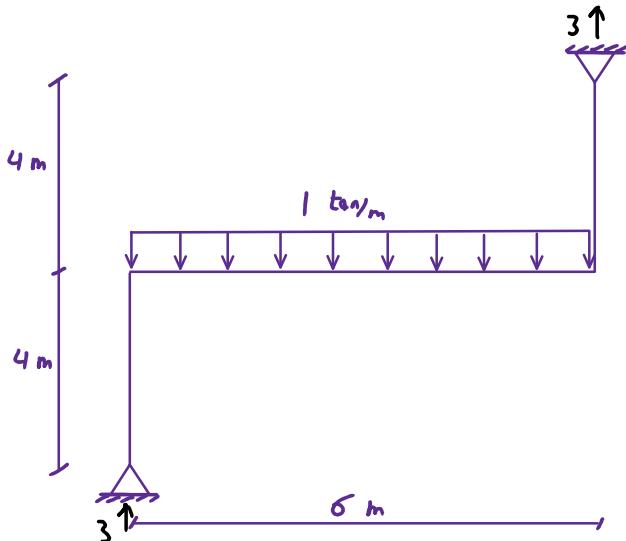
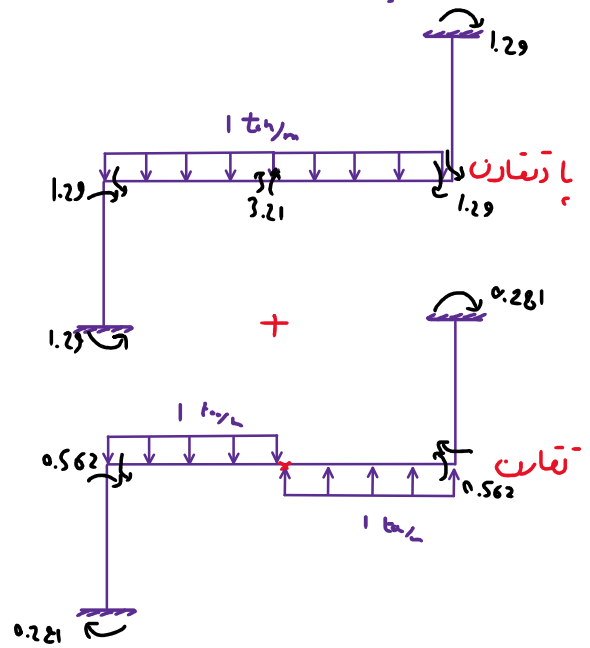
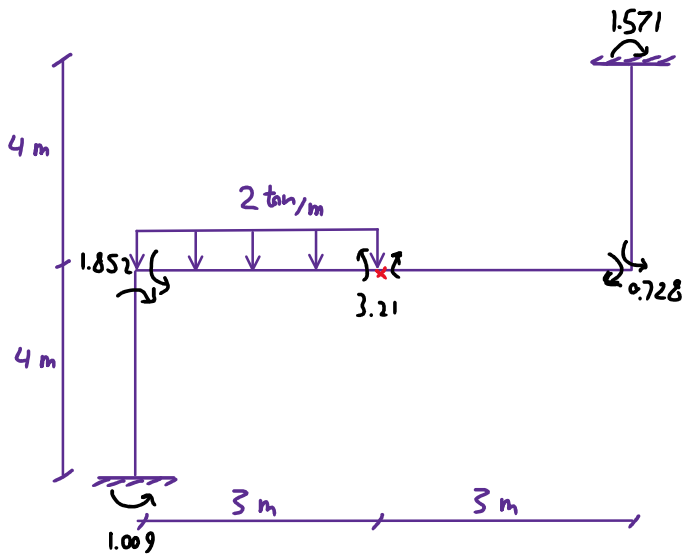


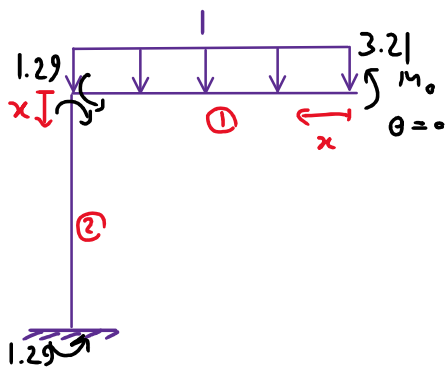
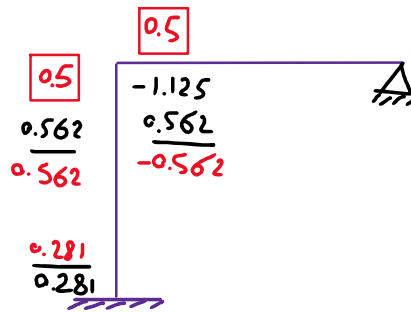
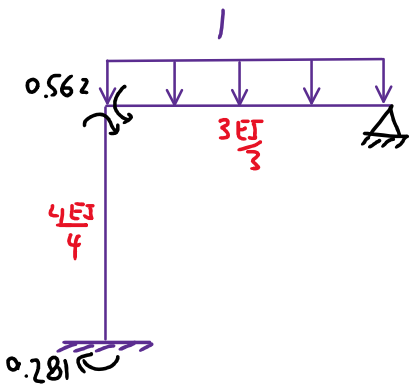
مثال: کنگره‌ماکزیمیم درس‌زه شکل زیر را به دست آورید.



مثال: گنرهای انتقالی اعضا را به دست آورید.



نشان نقطه استقیم:



$$\theta = \frac{\partial U}{\partial M_0} = \int \frac{M}{EI} \left(\frac{\partial M}{\partial M_0} \right) dx = 0$$

$$\textcircled{1} M = M_0 - \frac{x^2}{2} \quad , \quad \frac{\partial M}{\partial M_0} = 1$$

$$\textcircled{2} M = M_0 - 4.5 \quad , \quad \frac{\partial M}{\partial M_0} = 1$$

$$\int_0^3 (M_0 - \frac{x^2}{2}) dx + \int_0^4 (M_0 - 4.5) dx = 0$$

$$(M_0 x - \frac{x^3}{6}) \Big|_0^3 + (M_0 x - 4.5x) \Big|_0^4 = 0$$

نشان نقطه ای معلوم روشی کاتیانو

$$3M_a - 4.5 + 4M_b - 18 = 0 \rightarrow 7M_b = 22.5 \rightarrow M_b = 3.21 \text{ t.m}$$

