



مدرس خصوصى



اونلاين

يحصل الطالب على ...

*مقاطع فيديو هات لشرح المقرر بشكل وافي

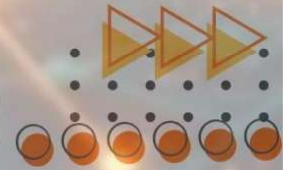
*ملخص للمادة للمراجعة النهائية

*محاضرات مباشرة على برنامج Zoom

*تواصل مستمر مع معلم المادة للمناقشة



للتواصل



00201024041097

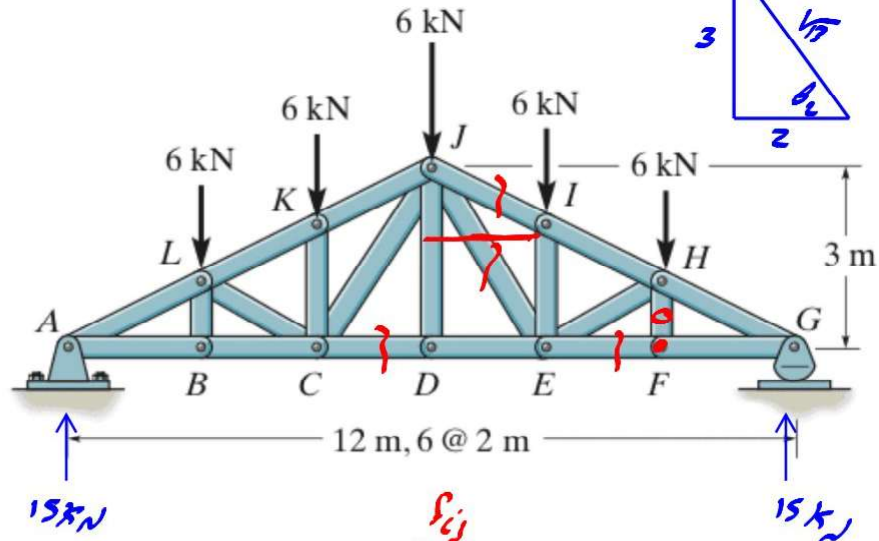


00201096019763

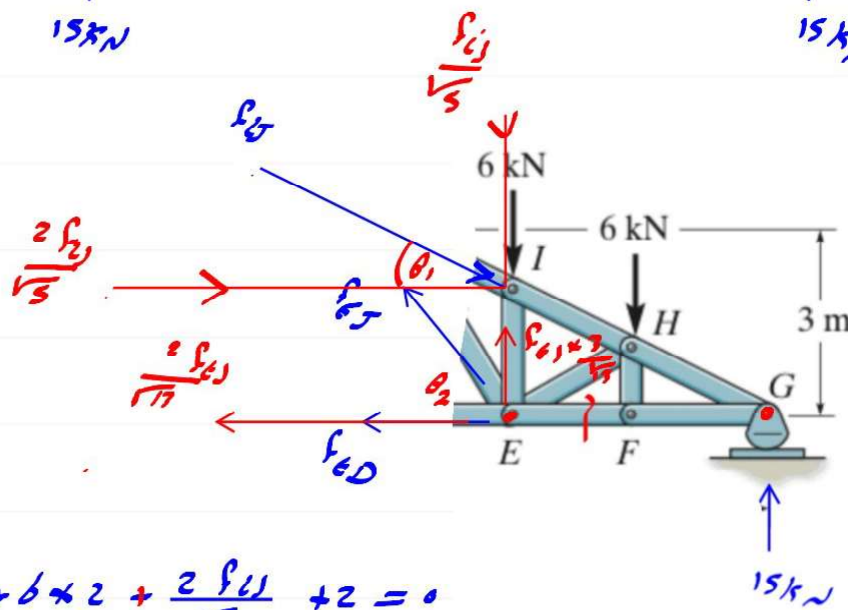
Mrahmedmahdy.com

For the shown truss determine the force in member (JE, JI, EF and CD) by using cutting method and indicate whether the members are in tension or compression.

$$\begin{aligned}
 & \sin \theta_1 = \frac{1}{\sqrt{5}} \\
 & \cos \theta_1 = \frac{2}{\sqrt{5}}
 \end{aligned}$$



$$\begin{aligned}
 \sum F_x &= 0 \\
 \sum F_y &= 0 \\
 \sum M &= 0
 \end{aligned}$$



$$\sum M_E = -15 \times 4 + 6 \times 2 + \frac{2 F_{JI}}{\sqrt{5}} \times 2 = 0$$

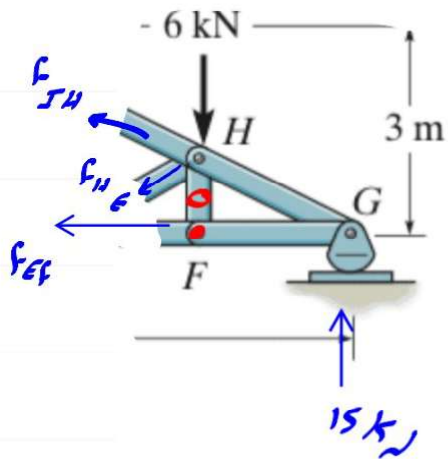
$$F_{JI} = -26.83 \text{ kN Tension} = 26.83 \text{ kN Comp}$$

$$\sum M_G = -6 \times 2 - 6 \times 4 + F_{JE} \times \frac{3}{\sqrt{5}} \times 1 = 0$$

$$F_{JE} = 10.8 \text{ kN Tension}$$

$$\sum F_x = -\frac{2}{\sqrt{5}} F_{JE} - F_{ED} + \frac{2}{\sqrt{5}} F_{JI} = 0$$

$$F_{ED} = 18 \text{ kN Tension} \Rightarrow F_{CD} = 18 \text{ kN Tension}$$



$$\sum M_H = -15 \times 2 + F_{GF} \times 1 = 0$$

$$F_{GF} = 30 \text{ kN} \quad \text{up}$$