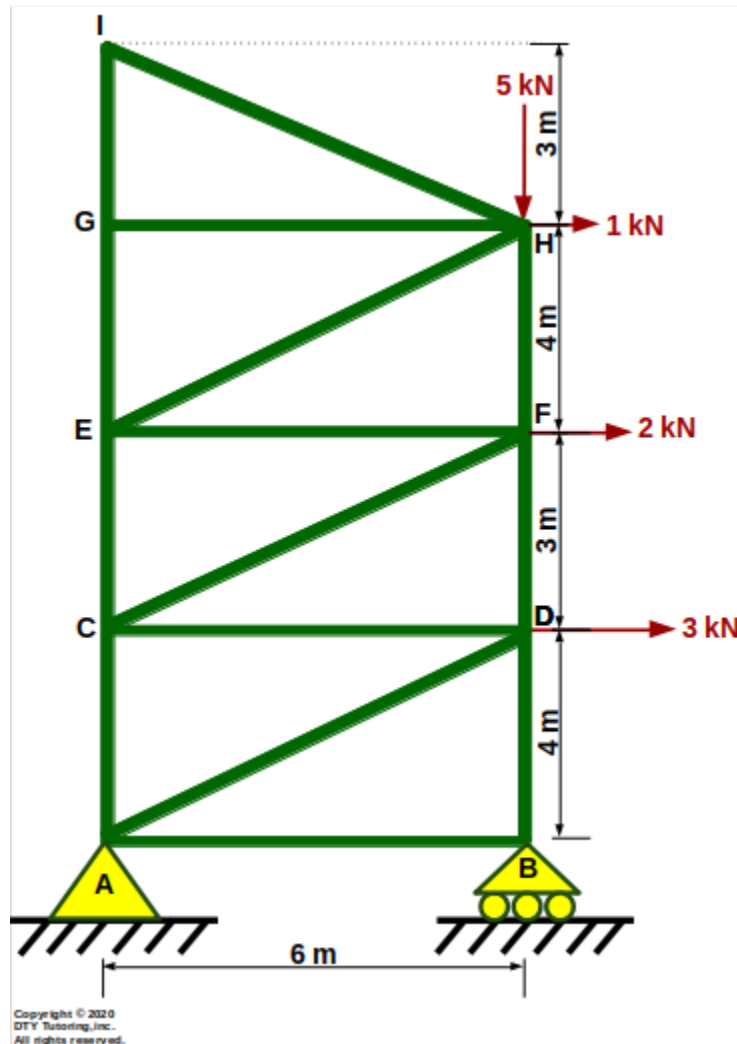


Date: 5<sup>th</sup> December 2020

*The vertical truss shown below is supported by a pin at A and a roller at B. Compute the forces in each member, indicate whether the members are in tension (T) or compression (C) and identify all zero force members.*





DTY Tutoring, inc.  
Email: [dtytutoring@gmail.com](mailto:dtytutoring@gmail.com)  
Website: [www.dtytutoring.com](http://www.dtytutoring.com)

**Answers (refer to solutions for detail)**

$$\begin{aligned}F_{AB} &= 0 \\F_{BD} &= 11.7 \text{ kN (C)} \\F_{AD} &= 7.21 \text{ kN (T)} \\F_{AC} &= 2.67 \text{ kN (T)} \\F_{CD} &= 3 \text{ kN (C)} \\F_{DF} &= 7.70 \text{ kN (C)} \\F_{EC} &= 0.67 \text{ kN (T)} \\F_{FH} &= 5.71 \text{ kN (C)} \\F_{CF} &= 3.60 \text{ kN (T)} \\F_{EF} &= 0.987 \text{ kN (C)} \\F_{EH} &= 1.20 \text{ kN (T)} \\F_{EG} &= 0 \\F_{GH} &= 0 \\F_{GI} &= 0 \\F_{IH} &= 0\end{aligned}$$