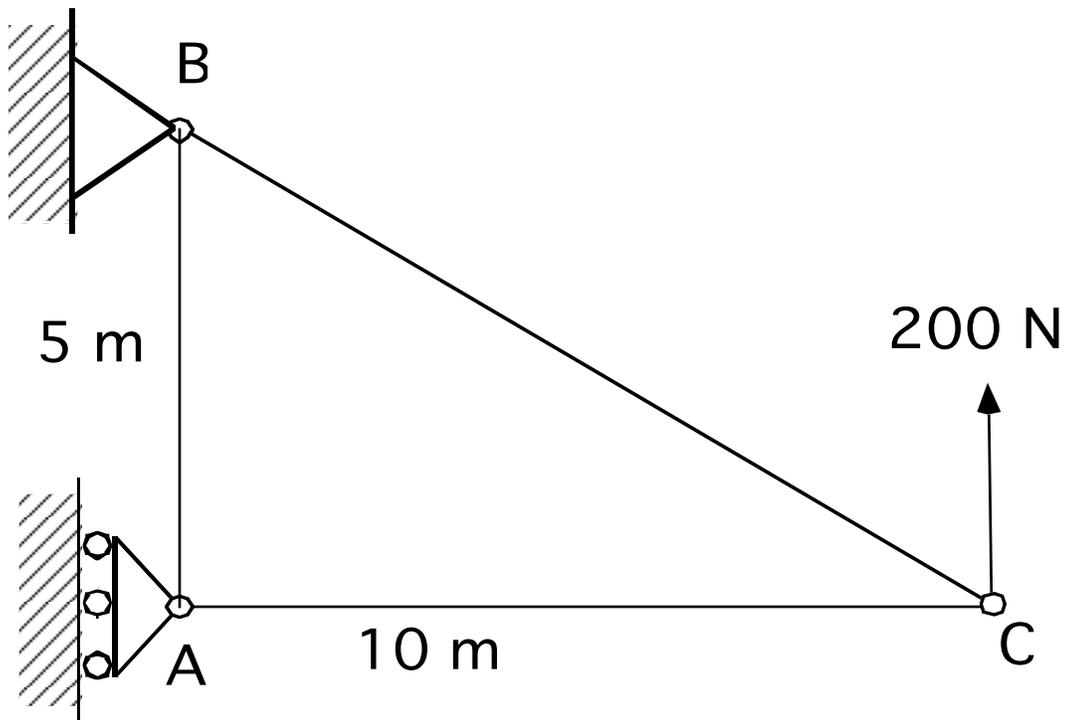


M8 Concept Question 1

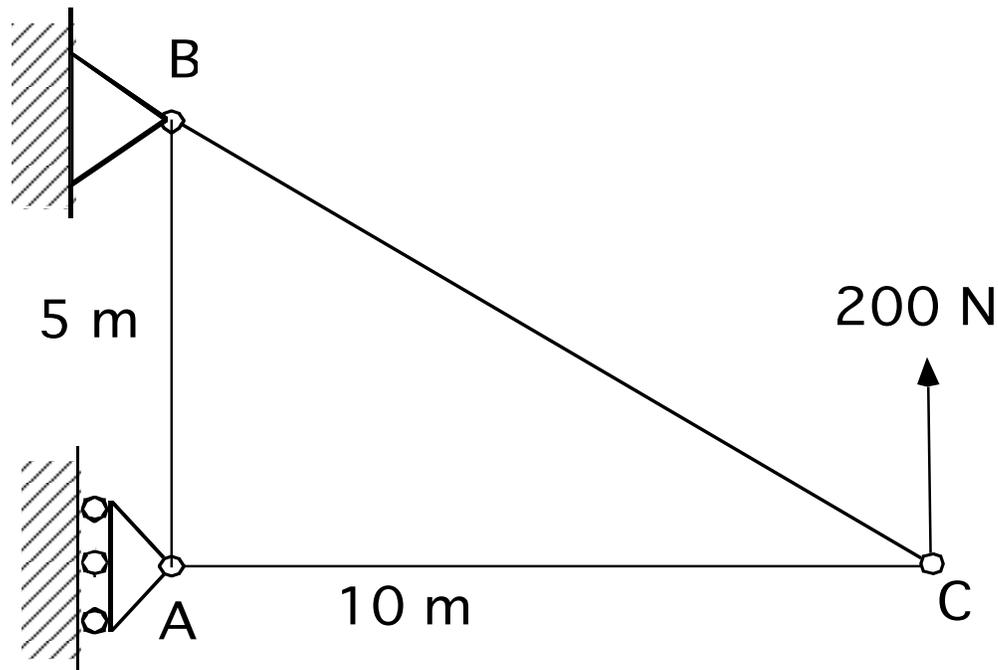
Of the following alternatives select the constitutive relationship that is likely to be most useful to allow us to determine the joint displacements of the pin-jointed truss shown below.



1. The bars behave as linear elastic springs, $F=k\Delta$
2. Bar forces and bar extensions are linked by $\Delta = \frac{FL}{AE}$
3. Bar forces and bar extensions are linked by $\Delta = \frac{FA}{LE}$
4. Bar forces are related to the applied load by $F = kP$
5. Bars BC and AC remain joined at C
6. Some other answer
7. I don't know/don't understand.

M8 Concept Question 2

Of the following alternatives select the compatibility conditions that are likely to be most useful to allow us to determine the displacements of the pin-jointed truss.



1. The bars remain joined at joints A, B and C
2. Point A will only move vertically, point B will not move, and point C will move toward B and away from A
3. The relative displacement of two joints connected by a bar is defined by extensional and rotational components consistent with the bars remaining connected at the joints
4. The bars will remain straight
5. We can represent the bar extensions as displacement vectors acting along the direction of the bars and calculate the joint displacements by vector addition
6. Some other answer
7. I don't know/don't understand.