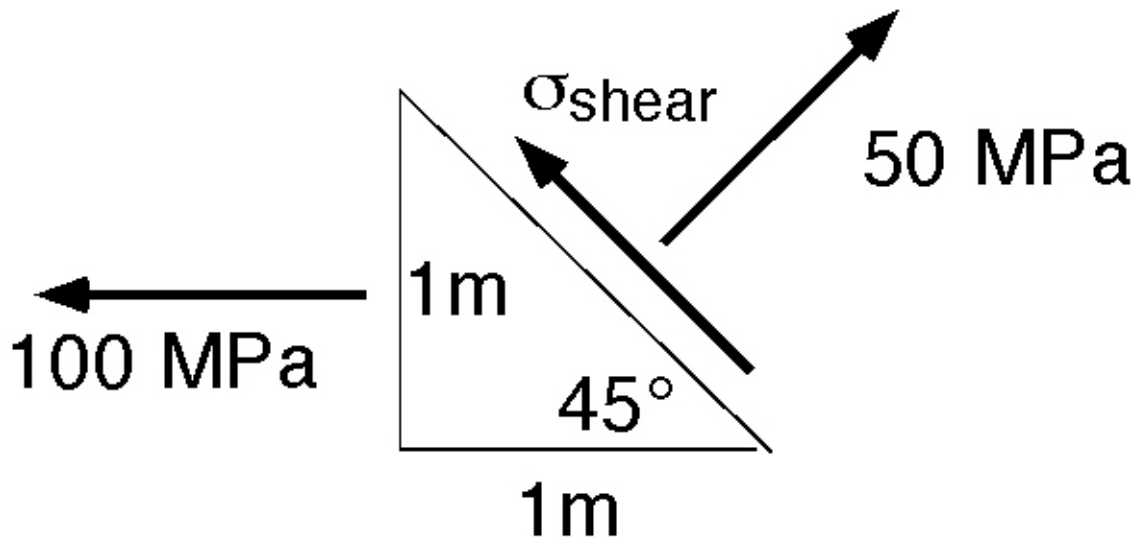


M14 Concept Question 1

A 45° triangular block of material, 1 m thick, and 1m on its straight sides, is loaded by tensile stresses of 100 MPa one face and 50 MPa on the inclined face. There is no stress on the third face. What is the magnitude of the shear stress on the inclined face required to achieve equilibrium of forces?



1. Application of a single component of shear stress cannot achieve equilibrium
2. $50(1-2\sqrt{2})$ MPa
3. $-50(1-2\sqrt{2})$ MPa
4. +50 MPa
5. **-50 MPa**
6. Some other answer
7. I do not know/do not understand