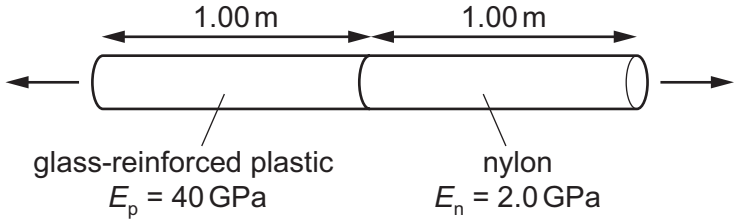
21 A composite rod is made by attaching a glass-reinforced plastic rod and a nylon rod end to end, as shown.



The rods have the same cross-sectional area and each rod is 1.00 m in length. The Young modulus E_p of the plastic is 40 GPa and the Young modulus E_n of the nylon is 2.0 GPa.

The composite rod will break when its total extension reaches 3.0 mm.

What is the greatest tensile stress that can be applied to the composite rod before it breaks?

A 7.1×10^{-14} Pa

B 7.1×10^{-2} Pa

C 5.7×10^{6} Pa

D 5.7×10^{9} Pa

Space for working