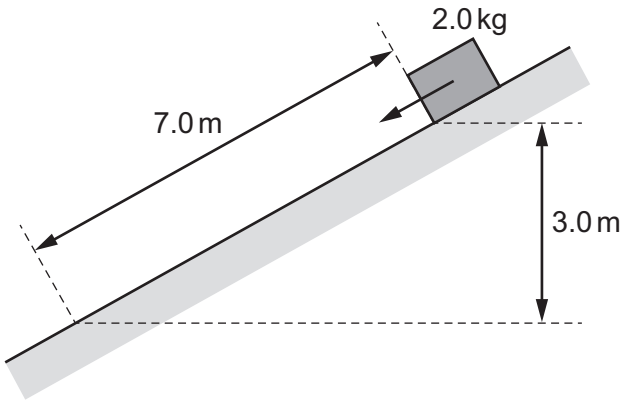
18 A block of mass 2.0 kg is released from rest on a slope. It travels 7.0 m down the slope and falls a vertical distance of 3.0 m. The block experiences a frictional force parallel to the slope of 5.0 N.



What is the speed of the block after falling this distance?

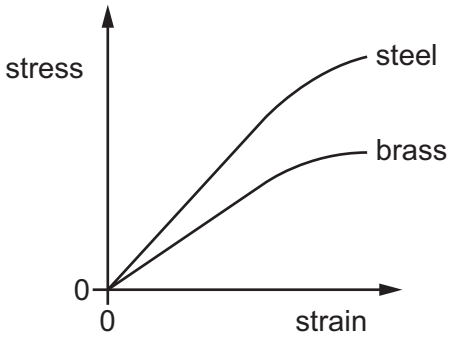
A $4.9\,m\,s^{-1}$ **B** $6.6\,m\,s^{-1}$ **C** $8.6\,m\,s^{-1}$ **D** $10\,m\,s^{-1}$

19 Two wires, one made of brass and the other of steel, are stretched in an experiment. Both wires obey Hooke's law during this experiment.

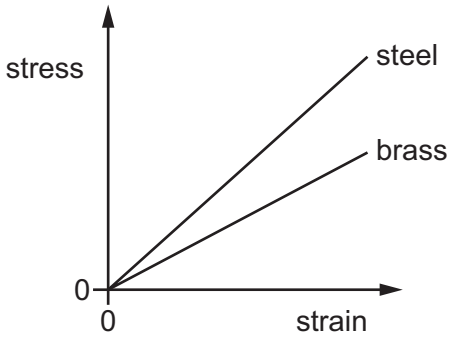
The Young modulus for brass is less than the Young modulus for steel.

Which graph shows how the stress varies with strain for both wires in this experiment?

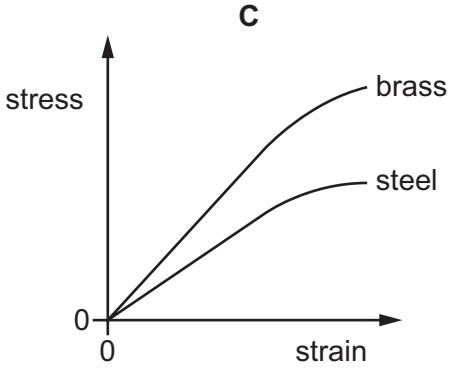
A



B



C



D