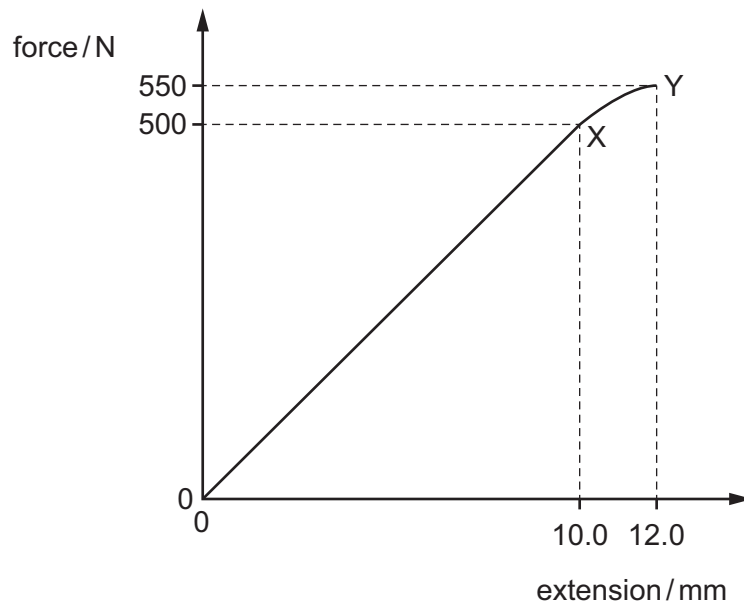


23 What is meant by the ultimate tensile stress of a material?

- A** the maximum force that can be applied to a bar of the material before it bends
- B** the maximum inter-atomic force before the atomic bonds of the material break
- C** the maximum stretching force per unit cross-sectional area before the material breaks
- D** the maximum tensile force in a wire of the material before it breaks

24 The graph shows the behaviour of a sample of a metal when it is stretched until it starts to undergo plastic deformation.



What is the total work done in stretching the sample from zero to 12.0 mm extension?
Simplify the calculation by treating the curve XY as a straight line.

- A** 3.30 J
- B** 3.55 J
- C** 3.60 J
- D** 6.60 J

Space for working