13 A chamber containing gas is sealed by a movable piston of mass 0.75 kg.
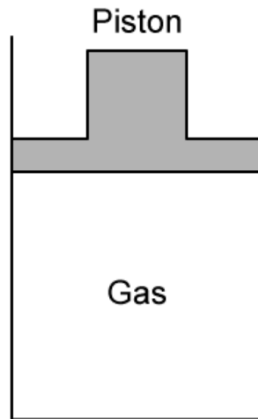

When the gas is heated, there is a short period in which the piston experiences an average upward acceleration of 3.5 m s^{-2} over a distance of 12 cm.

Calculate the work done by the gas during this period.

A 0.315 J **B** 1.20 J **C** 2.18 J **D** 32.4 kJ