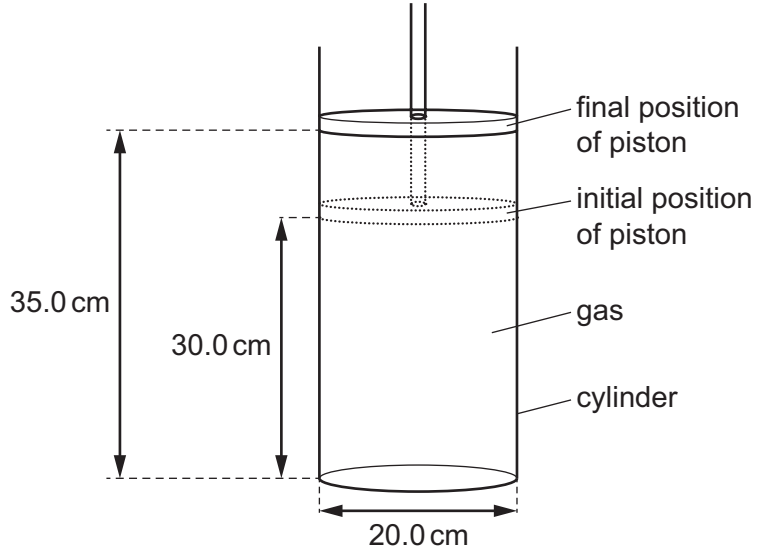
16 A gas is contained in a cylinder by a movable piston.



The cylinder has a circular cross-section of diameter 20.0 cm.

The pressure of the gas is 102 Pa and the piston is initially 30.0 cm from the base of the cylinder.

The gas is heated causing the piston to move up so that it is 35.0 cm from the base. The pressure of the gas remains constant.

How much work does the gas do in moving the piston?

A 0.160 J **B** 0.641 J **C** 1.12 J **D** 4.49 J