

- 11** One mole of ideal gas is contained within a cylinder by a frictionless piston and is initially at temperature T . The pressure of the gas is kept constant while it is heated and its volume doubles.

If R is the molar gas constant, what is the work done by the gas in increasing its volume?

A $\frac{1}{2}RT$

B RT

C $\frac{3}{2}RT$

D $2RT$

- 12** Which of the following statements about internal energy is correct?