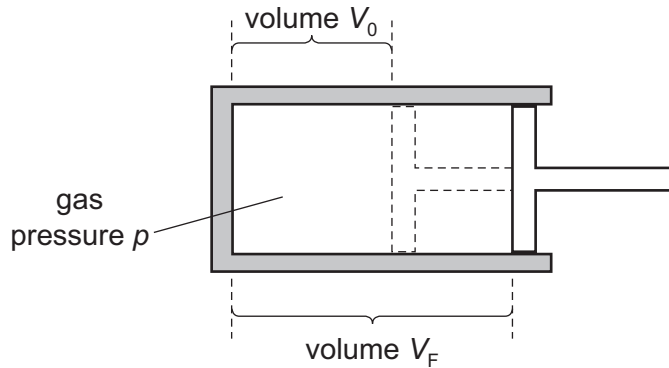


**16** Some gas in a cylinder is supplied with thermal energy  $q$ .

The gas does useful work in expanding at constant pressure  $p$  from volume  $V_0$  to volume  $V_F$ , as shown.



Which expression gives the efficiency of this change?

**A**  $\frac{pV_0}{q}$

**B**  $\frac{V_F}{V_0 q}$

**C**  $\frac{p(V_F - V_0)}{q}$

**D**  $\frac{(V_F - V_0)}{V_0 q}$

**17** The power  $P$  required to move an object through a medium at constant speed depends on the