

- 13 When a gas, trapped in a syringe, expands from volume V_i to volume V_f against a constant atmospheric pressure P , it does work against the atmosphere.

Which quantity should be multiplied by P in order to calculate the work done by the gas as it expands?

A $V_f + V_i$

B $\frac{V_f + V_i}{2}$

C $V_f - V_i$

D $\frac{V_f - V_i}{2}$

- 14 A ball is thrown vertically upwards with speed v from height zero at time $t = 0$. It reaches its