1. A gas cylinder and piston are covered with heavy insulation. The piston is pushed into the cylinder, compressing the gas. In this process the gas temperature

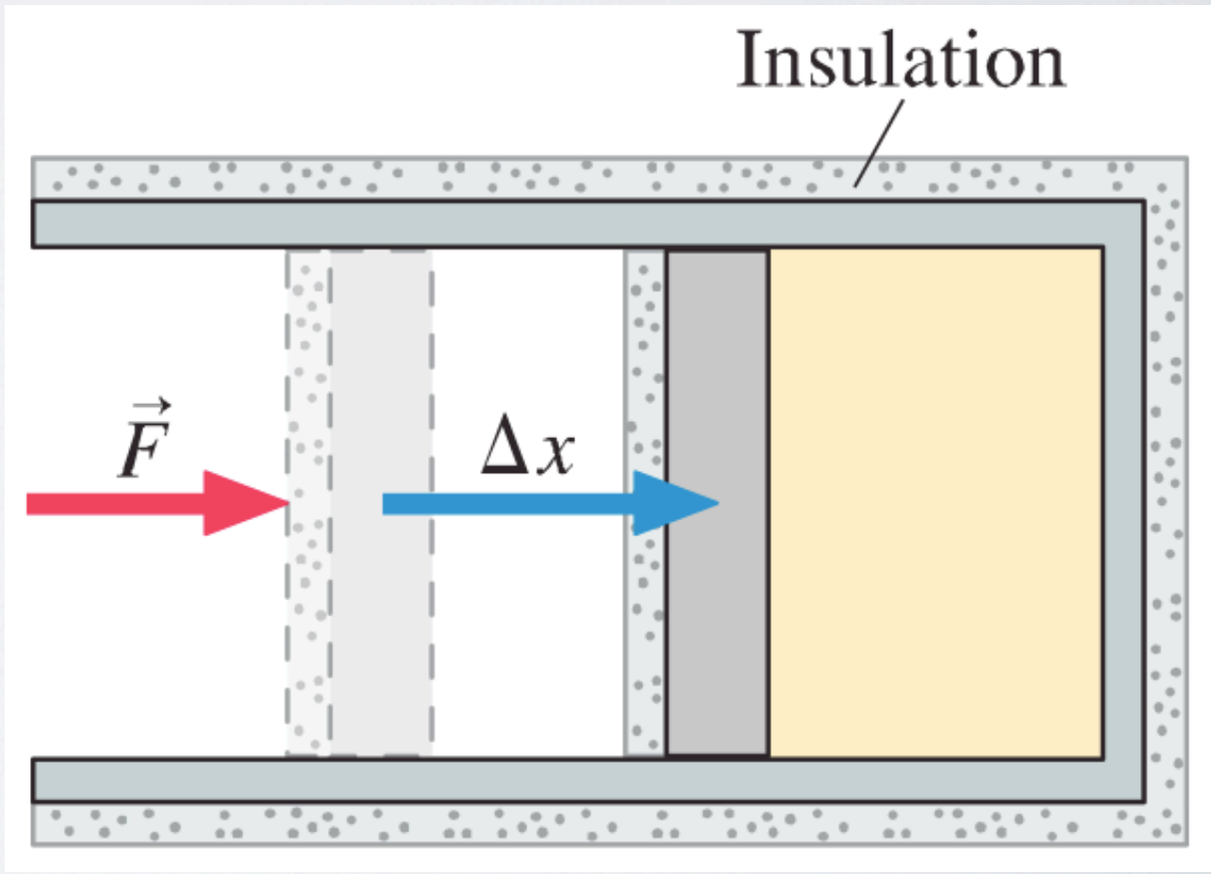
a. increases.

b. decreases.

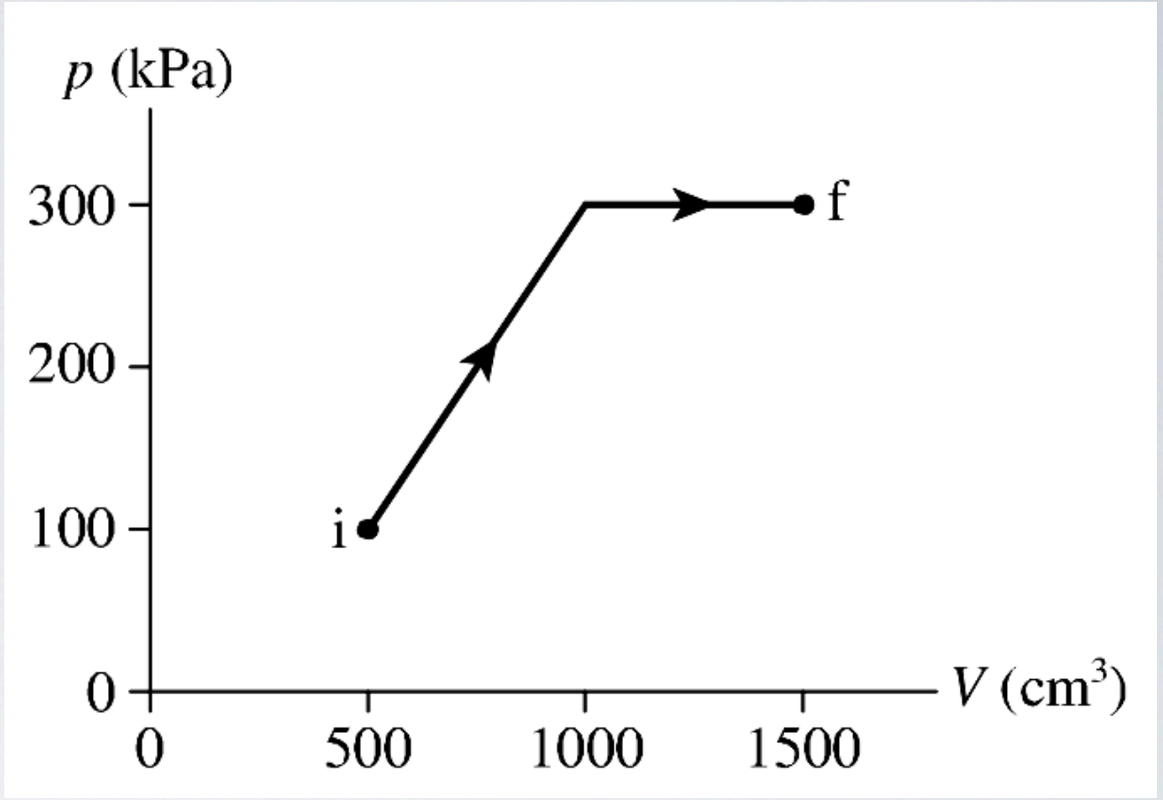
c. doesn't change.

d. There's not sufficient information to tell.

Explain.



2. How much work (in joules) is done on the gas in the ideal-gas process shown in the figure?



3. Two processes take an ideal gas from state 1 to state 3. Compare the work done by process A to the work done by process B.

a. $W_A = W_B = 0$
b. $W_A = W_B$ but neither is zero
c. $W_A > W_B$
d. $W_A < W_B$