Suppose we have a fixed volume, V, containing 1 mole of NO_2 at pressure p_0.

Suppose all the

$$2NO_2(g) \rightarrow N_2(g) + 2O_2(g)$$

If T remains the same, what would happen to p?

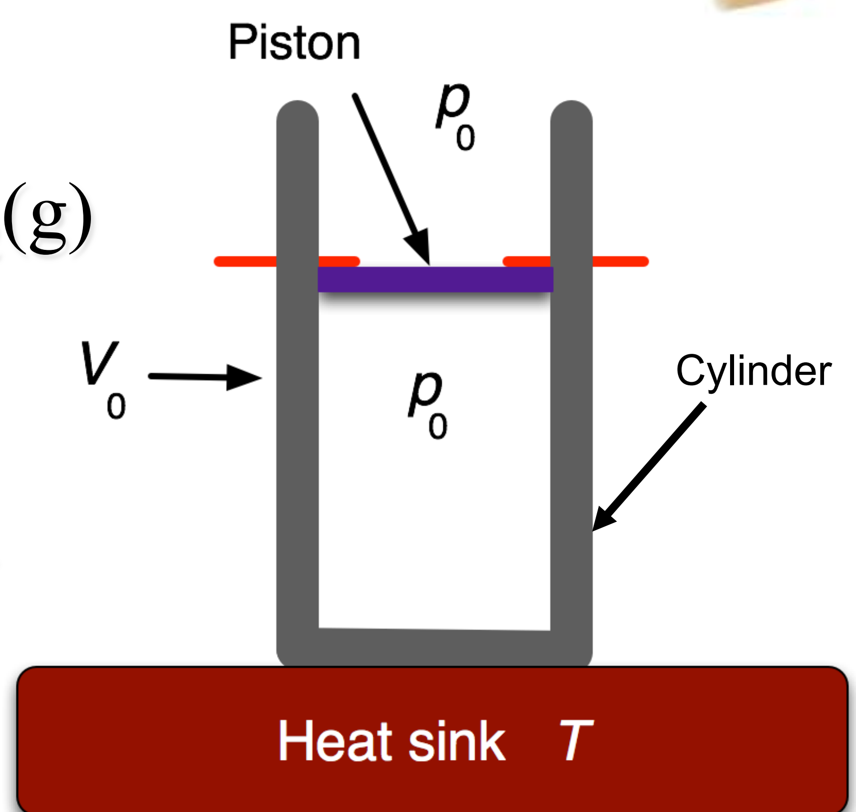
A. It would remain the same.

B. It would be 1.5 X as big.

C. It would double.

D. It would decrease but not by half.

E. It would increase but not double.



If we pull the pins holding the piston in place, the gases would expand until the pressures are equal. What would the new volume be?

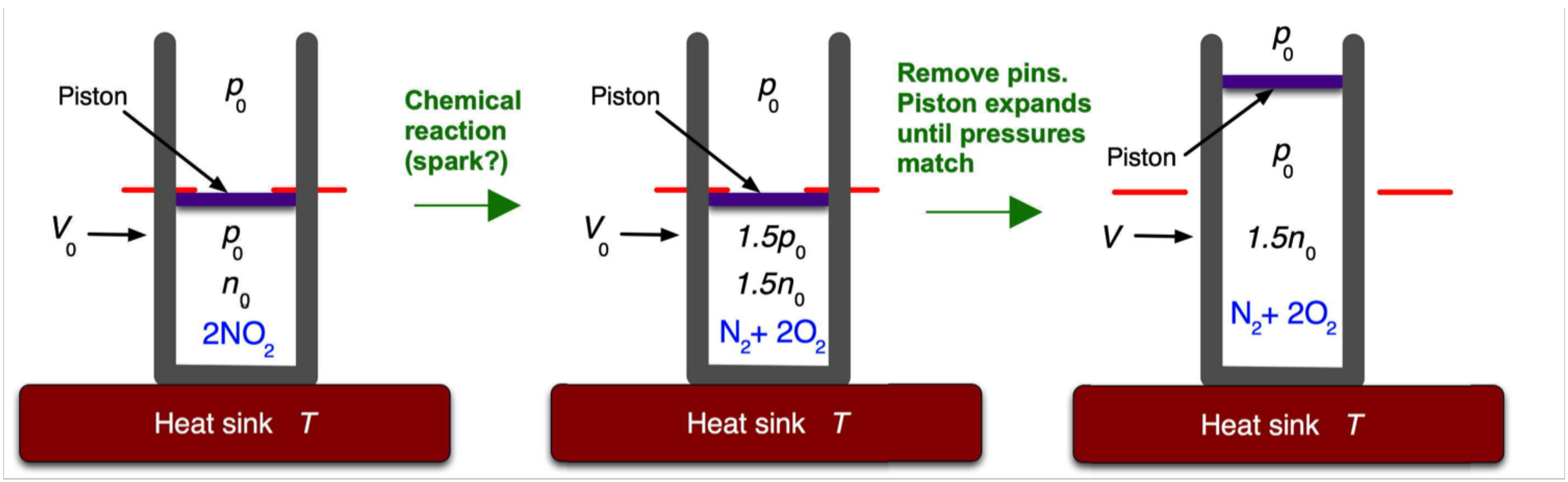
A. V_0

B. 2/3 V_0

C. 3/2 V_0

D. Between A and B

E. Between A and C

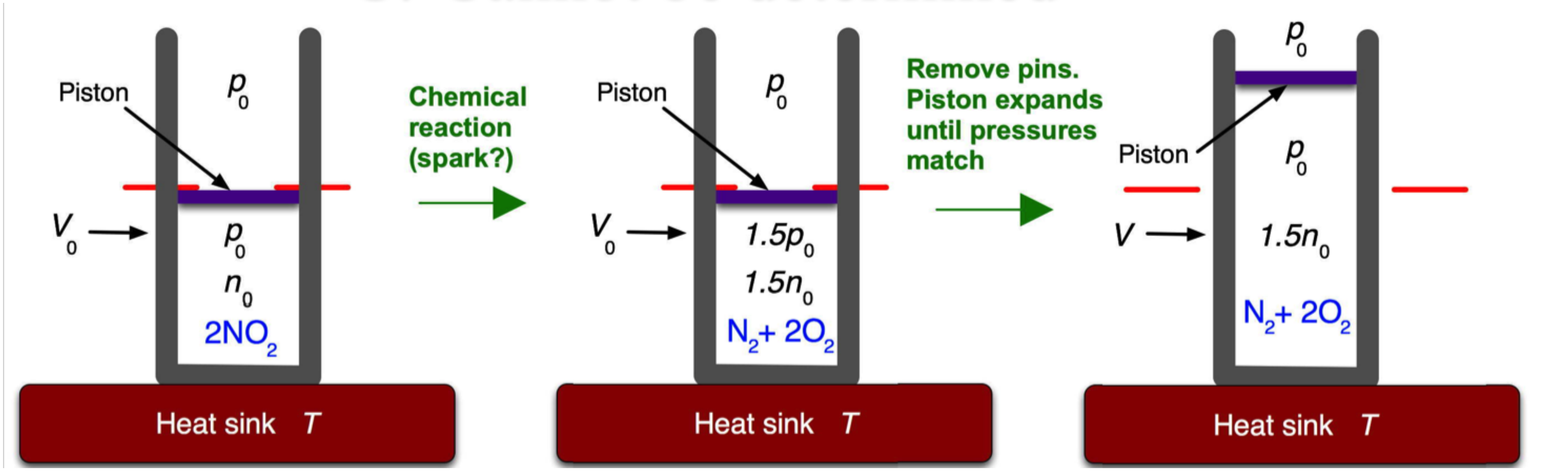


If we pull the pins holding the piston in place, the gases would expand until the pressures are equal. The new volume is 1.5 times as big as the original volume. The work done by the gas on the piston is:

A. Positive

B. Negative

C. Cannot be determined



Estimation: How much does enthalpy matter?

- Consider burning one mole of glucose.
  - Std. enthalpy of combustion $\Delta_c H_{298} = -2805$ kJ/mole
- How much does the internal energy change?