Suppose we have a fixed volume, $V$, containing 1 mole of NO$_2$ at pressure $p_0$.

Suppose all the

$$2\text{NO}_2(g) \rightarrow \text{N}_2(g) + 2\text{O}_2(g)$$

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.

$pV = Nk_B T$
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. $\frac{2}{3} V_0$

C. $\frac{3}{2} V_0$

D. Between A and B

E. Between A and C

$pV = Nk_B T$