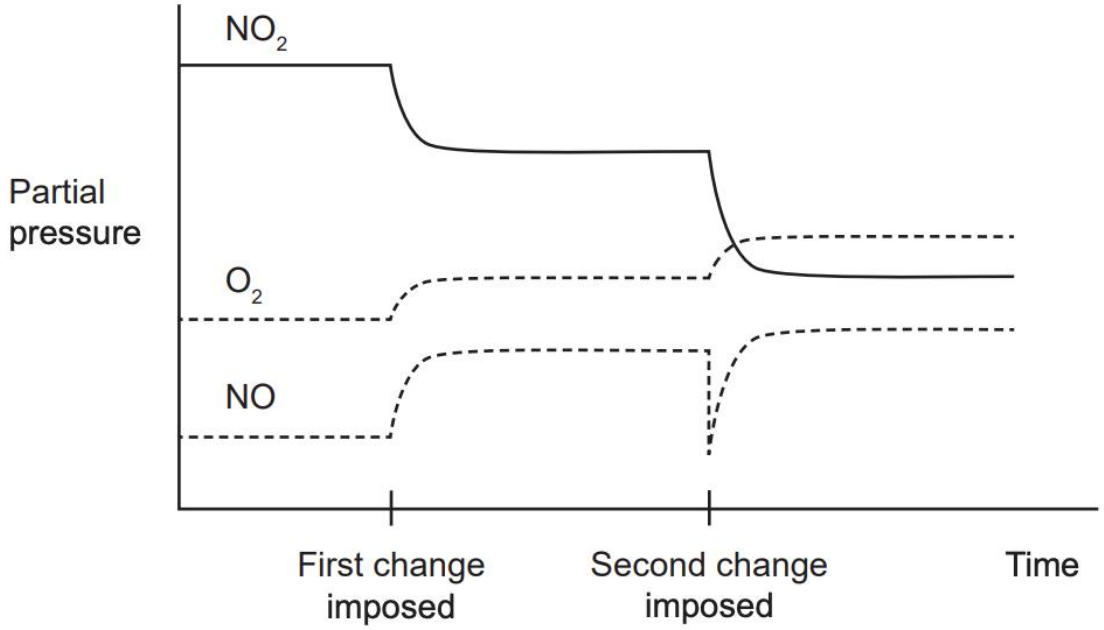
Nitrogen dioxide, $NO_2(g)$, is formed when nitrogen monoxide, NO(g), undergoes oxidation as shown below.

$$2\ NO(g) + O_2(g) \rightleftharpoons 2\ NO_2(g) \qquad \Delta H = -62\ kJ\ mol^{-1}$$

A change was imposed on an equilibrium gas mixture of NO_2, NO and O_2. The mixture returned to equilibrium and another change was imposed. The following graph shows the effects of the two changes.



3. Identify the imposed changes that **best** account for the shape of the graph.

	First change	Second change
(a)	the temperature is decreased	the partial pressure of O_2 is increased
(b)	the temperature is decreased	the partial pressure of NO is decreased
(c)	the temperature is increased	the partial pressure of O_2 is increased
(d)	the temperature is increased	the partial pressure of NO is decreased