



Chem!stry

Name: ()

Class:

Date: / /

Notes on Dynamic Equilibrium – Answers

1.

$$K_c = \frac{[\text{PCl}_3] \times [\text{Cl}_2]}{[\text{PCl}_5]}$$

2. Substituting figures into the equation above gives:

$$0.19 = \frac{0.010 \times [\text{Cl}_2]}{0.200}$$

Rearranging the equation gives:

$$[\text{Cl}_2] = \frac{0.19 \times 0.200}{0.010}$$

$$[\text{Cl}_2] = \underline{3.80 \text{ mol dm}^{-3}}$$

3. *Le Chatelier's theory* states that if the pressure of the reaction is reduced, then the equilibrium position will move in the direction that minimises this change, i.e. increase the pressure back to its original value. The equilibrium position will therefore move in the direction that produces the greater volume (moles) of gas, i.e. from left-to-right.



1 volume
(mole) of
gas.



2 volumes
(moles) of
gas.