Name _____ Date _____ Period _____

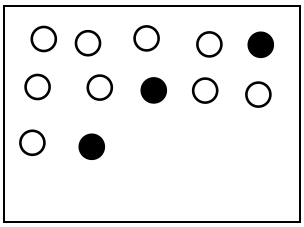
ZornScience
zornscience.org

7.8 Representations of Equilibrium

AP Chemistry

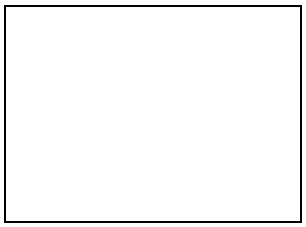
Count first. In one box, particle counts are proportional to concentration. Convert to molarity when you are given moles per particle and a volume.

1. The box shows A ⇌ B at equilibrium. Key: ● = A, ○ = B



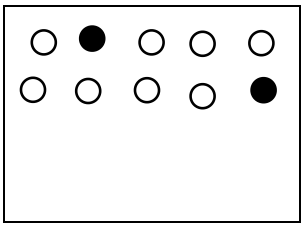
Calculate K.

2. For A ⇌ B, K = 1.5. A box starts with 10 A and 0 B. How many of each are present at equilibrium? Draw the box.

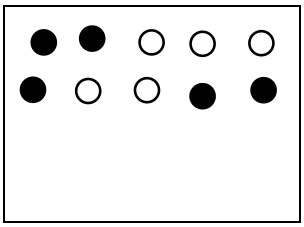


your drawing

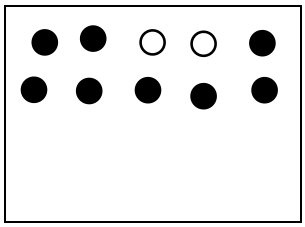
3. Each box shows A ⇌ B at equilibrium. Key: ● = A, ○ = B



Box 1



Box 2



Box 3

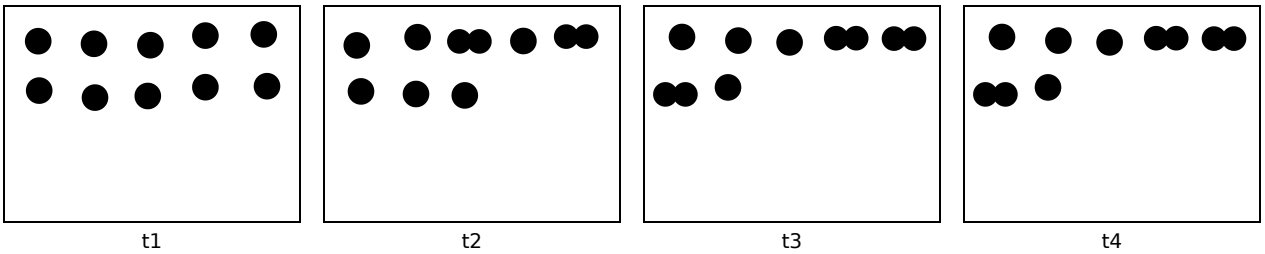
(a) Which box has K < 1?

(b) Which box has K = 4.0?

(c) Box 2 has K = 1. What does that mean?

CC BY-NC-SA 4.0 | zornscience.org

4. Snapshots for $2NO_2 \rightleftharpoons N_2O_4$ in a 1.0 L box. ● = one NO_2; ●● pair = one N_2O_4. Each particle is 0.10 mol.



t1 t2 t3 t4

(a) When is equilibrium reached?

(b) Show that the number of NO_2 units is the same in every box.

(c) Calculate K_c.

(d) Why can't you use raw counts for K here?

CC BY-NC-SA 4.0 | zornscience.org