

Solutions

Each answer shows the steps, then the **result**.

2.1

- No — they stay constant

2.2

- Large

2.3

- About 1

3.1 B

- mostly reactants means $K < 1$

3.2

(a)

- $K = \frac{[\text{B}]}{[\text{A}]} = \frac{9}{3} = 3$

(b)

- Products favored ($K > 1$)

3.3

- At equilibrium the forward and reverse rates are equal, so although individual molecules keep converting, the total number of each species does not change