

- A. also be doubled
B. be halved
C. become one-fourth
D. remain the same
24. Which of the following stresses would lead the exothermic reaction below to shift to the right?

$$A(g) + B(g) \rightleftharpoons 3C(g) + D(aq)$$
 A. Increasing [A]
B. Increasing [C]
C. Decreasing the volume
D. Increasing the temperature
25. Consider the following reaction system, which has a K_{eq} of 1.35×10^4 , taking place in a closed vessel at constant temperature.

$$AX_3(g) + X_2(g) \rightleftharpoons AX_5(g)$$
 Which of the following is NOT true about this system at equilibrium?
 A. Increasing the volume will produce more AX_3 .
 B. AX_5 is the main compound present.
 C. The rate of formation of AX_5 equals the rate of formation of AX_3 and X_2 .
 D. Increasing the pressure will produce more AX_5 .
26. Ammonia gas form according to this equation;

$$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$$
 Experimental data shows that the reaction shifts to the left at very cold temperatures. Using this information, what type of reaction occur?
 A. Exothermic
 B. Maxwell Boltzmann-like
 C. Endergonic
 D. Endothermic
27. Which of the following does not affect the equilibrium of a reaction?
 A. Adding heat
 B. Increasing the concentration of reactants
 C. Removing heat
 D. Adding a catalyst
28. Consider the following reaction:

$$N_2O_4(g) \rightleftharpoons 2NO_2(g)$$
 Which of the following changes would be expected to drive the reaction to the left?
 A. An increase in pressure.
 B. A decrease in pressure.
 C. Addition of water to the reaction mixture.
 D. Reducing the amount of NO_2 in the reaction vessel.
29. In the reaction:

$$2NO(g) + Cl_2(g) \rightleftharpoons 2NOCl(g)$$
 If the pressure exerted by the equilibrium mixture of NO, Cl_2 , NOCl gases is reduced at constant temperature, the system will re-establish equilibrium via
 A. an addition of moles of Cl_2 .
 B. an increase of the NOCl concentration.
 C. an addition of moles of NOCl.
 D. an increase of equilibrium constant K_c .