



Name _____ Class _____ Date _____

1

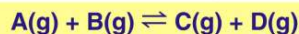
Given the reaction:

The value of the **equilibrium constant (K_{eq})** will be changed by **increasing** the

- A** pressure
- B** temperature
- C** concentration of SO₂(g)
- D** concentration of SO₃(g)

2

Given the reaction at equilibrium:

The addition of a **catalyst** will

- A** shift the equilibrium to the right
- B** shift the equilibrium to the left
- C** increase the rate of forward and reverse reactions equally
- D** have no effect on the forward or reverse reactions

3

Given the reaction:

In this reaction, 5 grams of powdered iron will **react faster** than a 1-gram piece of solid iron because the **powdered iron**

- A** has less surface area
- B** has more surface area

4

Given the reaction:



If the concentration of the HCl(aq) is increased, the frequency of reacting collisions will

- A** decrease, producing a decrease in the reaction rate
- B** decrease, producing an increase in the reaction rate

5

PREVIEW

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7

- A** 25°C
- B** 50°C
- C** 75°C
- D** 100°C

- B** decrease the frequency of collisions between A₂(g) and B₂(g)
- C** increase the production of B₂(g)
- D** increase the frequency of collisions between A₂(g) and B₂(g)

9

Given the reaction:

In the reaction, the **oxidizing agent** is

- A** F₂(g)
- B** Br⁻(aq)
- C** Br₂(l)
- D** F⁻(aq)

10Which **process** occurs in an operating **electrochemical cell**?

- A** a reduction reaction, only
- B** an oxidation reaction, only
- C** a chemical reaction produced by an electric current
- D** a chemical reaction that produces an electric current



ANSWER KEY

Given the reaction:

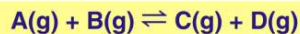


The value of the **equilibrium constant (K_{eq})** will be changed by **increasing the**

- A** pressure
- B** temperature
- C** concentration of SO₂(g)
- D** concentration of SO₃(g)

(b)

Given the reaction at equilibrium:



The addition of a **catalyst** will

- A** shift the equilibrium to the right
- B** shift the equilibrium to the left
- C** increase the rate of forward and reverse reactions equally
- D** have no effect on the forward or reverse reactions

(c)

Given the reaction:



In this reaction, 5 grams of powdered iron will **react faster** than a 1-gram piece of solid iron because the **powdered iron**

- A** has less surface area
- B** has more surface area
- C** is less dense
- D**

(b)

Given the reaction:



If the concentration of the HCl(aq) is increased, the frequency of reacting collisions will

- A** decrease, producing a decrease in the reaction rate
- B** decrease, producing an increase in the reaction rate
- C** increase, producing a decrease in the reaction rate
- D**

(d)



PREVIEW

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- B** 50°C
- C** 75°C
- D** 100°C

between A₂(g) and B₂(g)

- C** increase the production of B₂(g)
- D** increase the frequency of collisions between A₂(g) and B₂(g)

Given the reaction:



In the reaction, the oxidizing agent is

- A** F₂(g)
- B** Br⁻(aq)
- C** Br₂(l)
- D** F⁻(aq)

(a)

Which **process** occurs in an operating **electrochemical cell**?

- A** a reduction reaction, only
- B** an oxidation reaction, only
- C** a chemical reaction produced by an electric current
- D** a chemical reaction that produces an electric current

(d)