The Rate and Extent of Chemical Change — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **A kite is held by a string. What force does the string exert?**

- A gravity
- B friction
- C air resistance
- D tension

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2 **A wristwatch is used to time a race. What is speed calculated from?**

- A distance and time
- B time only, not distance
- C distance only, not time
- D mass and time together

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3 **A cup of coffee is hot. How is energy transferred to the air?**

- A by radiation only, from the surface
- B by evaporation only, from the top
- C by condensation on the cold cup
- D by conduction and convection

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4 **A yellow school bus carries children to school. Which blood vessel carries blood away from the heart, like a bus leaving the station?**

- A an artery
- B a vein
- C a ventricle
- D a capillary

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5 **A passenger train carries people around the country. Which part of the blood is like the train, carrying oxygen around the body?**

- A red blood cells
- B platelets
- C white blood cells
- D plasma

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6 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- A above normal
- B below normal
- C exactly normal
- D impossible to tell

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7 **A solution has a concentration of 1 mol per cubic decimetre. How many moles are in 3 cubic decimetres of the solution?**

- A 6 mol
- B 3 mol
- C 4 mol
- D 2 mol

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8 **A reaction makes 1 moles of gas. What volume does the gas occupy at room temperature and pressure?**

- A 24 dm^3
- B 48 dm^3
- C 12 dm^3
- D 36 dm^3

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9 **A reaction produces 40 cm cubed of gas in 20 seconds. What is the mean rate of reaction?**

- A 2.5 cm^3/s
- B 4 cm^3/s
- C 2 cm^3/s
- D 1.5 cm^3/s

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10 **A reaction should make 100 g of product but only makes 50 g. What is the percentage yield?**

- A 60%
- B 40%
- C 100%
- D 50%

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11 **What is the Haber process used to make?**

- A sulfuric acid
- B ammonia
- C nitric acid
- D hydrogen

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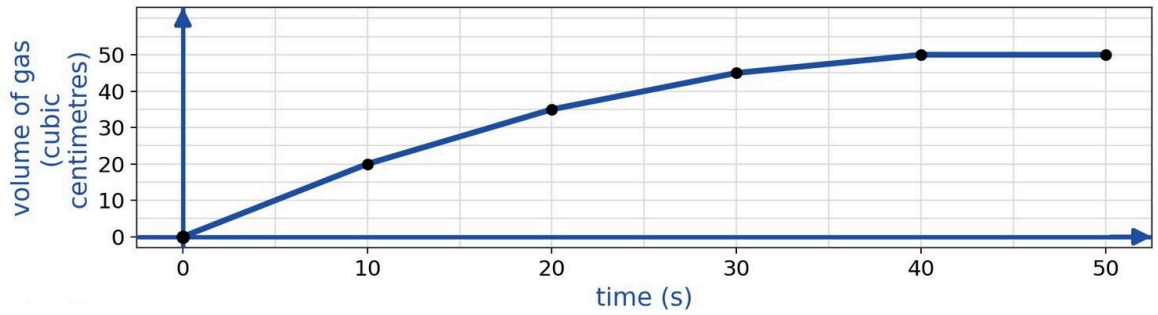
12 **The graph shows the volume of gas made in a reaction. After how many seconds does the reaction finish?**



A 50

B 30

C 40

D 20

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13 **In an experiment, 40 cubic centimetres of gas are made in 30 seconds. What is the rate of the reaction?**

- A 1200 cm^3/s
- B 0.6667 cm^3/s
- C 1.3333 cm^3/s
- D 2.6667 cm^3/s

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14 **In a second experiment, 50 cm cubed of gas are made in 30 seconds. What is the rate of the reaction?**

- A 1.6667 cm^3/s
- B 1.1667 cm^3/s
- C 2.1667 cm^3/s
- D 3.1667 cm^3/s

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15 **A solution has a concentration of 1 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

- A 1 mol
- B 4 mol
- C 3 mol
- D 2 mol

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16 **A reaction should make 100 g of product but only makes 80 g. What is the percentage yield?**

- A 70%
- B 80%
- C 90%
- D 160%

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17 **In an experiment, 60 cubic centimetres of gas are made in 30 seconds. What is the rate of the reaction?**

A 4 cm^3/s

B 1800 cm^3/s

C 1 cm^3/s

D 2 cm^3/s

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18 **A solution has a concentration of 2 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

A 4 mol

B 8 mol

C 5 mol

D 3 mol

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19 **A reaction makes 3 moles of gas. What volume does the gas occupy at room temperature and pressure?**

- **A** 60 dm^3
- **B** 84 dm^3
- **C** 144 dm^3
- **D** 72 dm^3

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20 **A reaction produces 20 cm cubed of gas in 10 seconds. What is the mean rate of reaction?**

- **A** 4 cm^3/s
- **B** 2 cm^3/s
- **C** 1.5 cm^3/s
- **D** 2.5 cm^3/s

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21 **What is a reversible reaction?**

- **A** a reaction that never finishes
- **B** a reaction that makes two products
- **C** a reaction that can go both ways
- **D** a reaction that needs a catalyst

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22 **In an experiment, 20 cubic centimetres of gas are made in 10 seconds. What is the rate of the reaction?**

- **A** 200 cm^3/s
- **B** 1 cm^3/s
- **C** 4 cm^3/s
- **D** 2 cm^3/s

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23 **In a second experiment, 90 cm cubed of gas are made in 15 seconds. What is the rate of the reaction?**

- A 6.5 cm^3/s
- B 6 cm^3/s
- C 7.5 cm^3/s
- D 5.5 cm^3/s

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24 **A solution has a concentration of 2 mol per cubic decimetre. How many moles are in 3 cubic decimetres of the solution?**

- A 7 mol
- B 5 mol
- C 12 mol
- D 6 mol

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25

A reaction produces 60 cm cubed of gas in 20 seconds. What is the mean rate of reaction?

A 3.5 cm^3/s

B 3 cm^3/s

C 2.5 cm^3/s

D 6 cm^3/s

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ANSWER KEY

1.	D	**10.**	D	**19.**	D
2.	A	**11.**	B	**20.**	B
3.	D	**12.**	C	**21.**	C
4.	A	**13.**	C	**22.**	D
5.	A	**14.**	A	**23.**	B
6.	A	**15.**	D	**24.**	D
7.	B	**16.**	B	**25.**	B
8.	A	**17.**	D		
9.	C	**18.**	A		

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