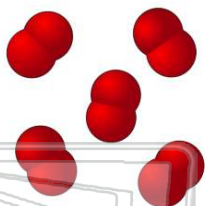




Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

- 1 One mole of  $O_2$  has **approximately the same mass** as one mole of

A  $CH_4$   
 B S  
 C LiH  
 D  $Cl_2$



- 2 Which 1.0-mole sample at 1 atm has particles with the **greatest entropy**?

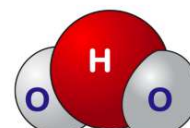
A  $CH_4(g)$  at  $25^\circ C$   
 B  $H_2S(g)$  at  $40^\circ C$   
 C  $CH_4(g)$  at 300 K  
 D  $H_2S(g)$  at 310 K

- 3 The **number of moles of molecules** in a **12.0-gram** sample of  $Cl_2$  is

A  $\frac{12.0}{35.5}$  mole    C 12.0 moles  
 B  $\frac{12.0}{71.0}$  mole    D  $12.0 \times 35.5$  moles

- 4 The percent by **mass of water** in the hydrate  $Na_2SO_4 \cdot 10H_2O$  is closest to

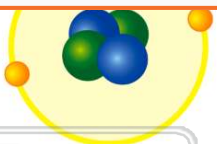
A 18%  
 B 44%  
 C 56%  
 D 76%



## PREVIEW

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- 6
- A  $2 \times 10$   
 B  $3 \times 10^{23}$   
 C  $3 \times 10^{23}$   
 D  $4 \times 10^{23}$

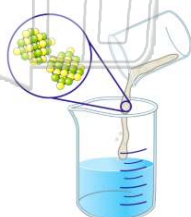


B 2.0 M  
 C 0.50 M  
 D 0.25 M



- 9 What is the **total number of moles of solute** in **250 milliliters** of a **1.0 M** solution of NaCl?

A 1.0 mole  
 B 0.25 mole  
 C 0.50 mole  
 D 42 moles



- 10 Given the reaction:  
 $4NH_3 + 5O_2 \rightarrow 4NO + 6H_2O$   
 What is the **total number of moles of NO** produced when 1.0 mole of  $O_2$  is completely consumed?

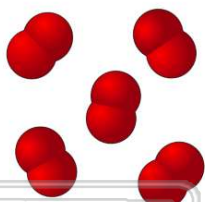
A 1.0 mole    C 0.80 mole  
 B 1.2 moles    D 4.0 moles



## ANSWER KEY

One mole of  $O_2$  has **approximately the same mass** as one mole of

- A  $CH_4$
- B S
- C LiH
- D  $Cl_2$



(b)

Which 1.0-mole sample at 1 atm has particles with the **greatest entropy**?

- A  $CH_4(g)$  at  $25^\circ C$
- B  $H_2S(g)$  at  $40^\circ C$
- C  $CH_4(g)$  at 300 K
- D  $H_2S(g)$  at 310 K

(b)

The **number of moles of molecules** in a **12.0-gram** sample of  $Cl_2$  is

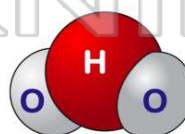
- A  $\frac{12.0}{35.5}$  mole
- B  $\frac{12.0}{71.0}$  mole
- C 12.0 moles
- D  $12.0 \times 35.5$  moles

(b)

The percent by **mass of water** in the hydrate  $Na_2SO_4 \cdot 10H_2O$  is closest to

- A 18%
- B 44%
- C 56%
- D 76%

(c)



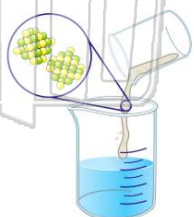
## PREVIEW

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D  $4 \times 10^{23}$

What is the **total number of moles of solute** in **250 milliliters** of a **1.0 M** solution of NaCl?

- A 1.0 mole
- B 0.25 mole
- C 0.50 mole
- D 42 moles

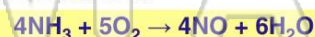


(b)

- C 0.50 M
- D 0.25 M



Given the reaction:



What is the **total number of moles of NO** produced when 1.0 mole of  $O_2$  is completely consumed?

- A 1.0 mole
- B 1.2 moles
- C 0.80 mole
- D 4.0 moles

(c)