Measurements and Calculations

CHEM

Name _____ Class _____ Date _____

1 What is the **percent composition** by mass of **nitrogen** in NH_4NO_3 (gram-formula mass = 80.0 grams/mole)?

A 17.5%
B 35.0%
C 52.5%
D 60.0%

2 How many milliliters of 0.100 M NaOH(aq) would be needed to **completely neutralize** 50.0 milliliters of 0.300 M HCl(aq)?

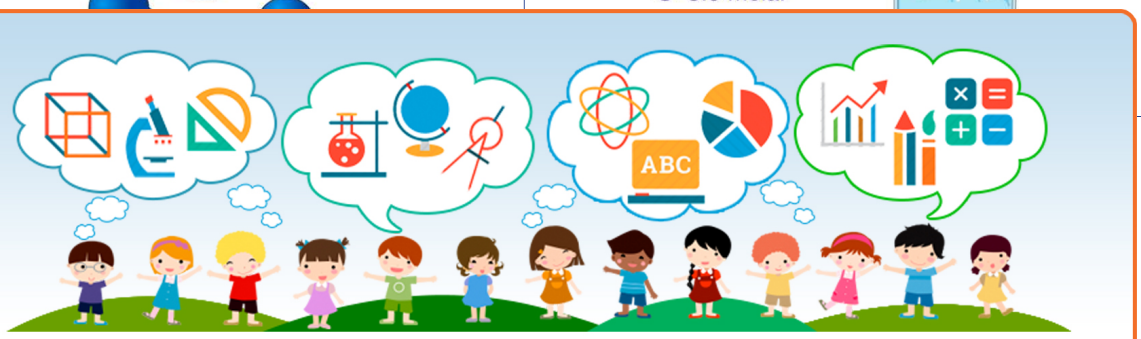
A 16.7 mL
B 50.0 mL
C 150 mL
D 300 mL

3 What is the **density** of N_2 at STP?

A 1.00 g/L
B 1.25 g/L
C 1.43 g/L
D 1.98 g/L

4 Which concentration of a sugar solution has a **boiling point** of **100.52°C** at standard pressure?

A 1.0 molal
B 2.0 molal
C 3.0 molal



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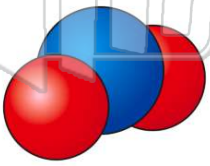
7

B NO_2
C N_2O_3
D N_2O_5

C 35%
D 60%

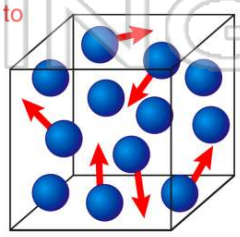
9 A compound whose empirical formula is NO_2 could have a **molecular mass** of

A 23
B 39
C 92
D 120



10 The density of a gas is **1.43 grams per liter** at STP. The mass of **1 mole** of this gas is equal to

A 1.43 g
B 15.7 g
C 22.4 g
D 32.0 g



CHEM

ANSWER KEY

What is the **percent composition** by mass of **nitrogen** in NH_4NO_3 (gram-formula mass = 80.0 grams/mole)?

A 17.5%
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C 52.5%
D 60.0%

b

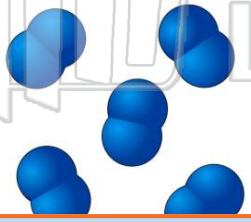
How many milliliters of 0.100 M NaOH(aq) would be needed to **completely neutralize** 50.0 milliliters of 0.300 M HCl(aq)?

A 16.7 mL
B 50.0 mL
C 150 mL
D 300 mL

c

What is the **density** of N_2 at STP?

A 1.00 g/L
B 1.25 g/L
C 1.43 g/L
D 1.98 g/L



b

Which concentration of a sugar solution has a boiling point of **100.52°C** at standard pressure?

A 1.0 molal
B 2.0 molal
C 3.0 molal
D 4.0 molal

a

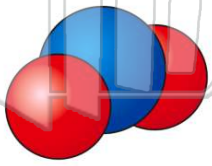
C N_2O_3
D N_2O_5

D 60%

Nitrogen
14.007

A compound whose empirical formula is NO_2 could have a **molecular mass** of

A 23
B 39
C 92
D 120



c

The density of a gas is **1.43 grams per liter** at STP. The mass of **1 mole** of this gas is equal to

A 1.43 g
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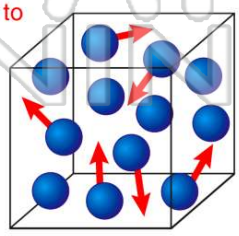
C 22.4 g
D 32.0 g



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