Stoich	Review	Questions
--------	--------	-----------

Nan	ne:	_ Da	nte:
1.	The gram-formula mass of (NH ₄) ₂ CO ₃ is		1
	A. 46.0 g B. 64.0 g C. 78	3.0 g D. 96.0 g	
2.	What is the gram formula mass of $CuSO_4 \cdot 5H_2C$)?	2
	A. 160 g B. 178 g C. 18	36 g D. 250 g	
3.	The total number of molecules in 34.0 grams of	NH ₃ is equal to	3
	A. 1.00×22.4 B.2.C. $1.00 \times 6.02 \times 10^{23}$ D.2.	00×22.4 $00 \times 6.02 \times 10^{23}$	
4.	Approximately how many atoms are there in 3.0	moles of Al?	4
	A. 6.0×10^{23} B. $2(6.0 \times 10^{23})$ C. $3(6.0 \times 10^{23})$	(6.0×10^{23}) D. $4(6.0 \times 10^{23})$	
5.	How many molecules are in 0.25 mole of CO?		5
	A. 1.5×10^{23} B. 6.0×10^{23} C. 3.	0×10^{23} D. 9.0×10^{23}	

6.	What is the total number of moles in 80.0 grams of C_2H_5Cl (gram-for = 64.5 grams/mole)?	rmula mass 6
7.	What is the percent by mass of hydrogen in NH_3 (formula mass = 17.0))? 7
	A. 5.9% B. 17.6% C. 21.4% D. 82	2.4%
8.	The percentage by mass of hydrogen in NH ₃ is equal to	8
	A. $\frac{1}{17} \times 100$ B. $\frac{3}{17} \times 100$ C. $\frac{17}{3} \times 100$ D. $\frac{6}{17}$	7 × 100
9.	What is the percent by mass of zinc in $ZnCO_3$ [gram formula mass =	125 g]? 9.
	A. 12% B. 48% C. 52% D. 65	5%
10.	What is the percent by mass of hydrogen in CH ₃ COOH (formula mass	s = 60)? 10
	A. 1.7% B. 5.0% C. 6.7% D. 7.1	1%

11. Which is an empirical formula?

11. ____

A. C_2H_2 B. C_2H_4 C. Al_2Cl_6 D. K_2O

- - A. $CaCO_3$ B. CaC_2O_4 C. CaC_3O_6 D. $CaCO_2$

- 13. A compound consists of 85.7% carbon and 14.3% hydrogen by mass. Its empirical 13. ______ formula is
 - A. CH B. CH_2 C. CH_3 D. CH_4

- 14. What is the molecular formula of a compound that has a molecular mass of 42 14. ______ and an empirical formula of CH₂?
 - A. CH_2 B. C_2H_4 C. C_3H_6 D. C_4H_{12}

- 15. A compound with an empirical formula of CH₂ has a molecular mass of 70. What 15. ______ is the molecular formula?
 - A. CH_2 B. C_2H_4 C. C_4H_8 D. C_5H_{10}

16. Given the reaction:

$$Mg(s) + 2AgNO_3(aq) \rightarrow Mg(NO_3)_2(aq) + 2Ag(s)$$

Which type of reaction is represented?

A. single replacement B. double replacement	replacement	B. double replacem
---	-------------	--------------------

C. synthesis D. decomposition

- 17. Which equation represents a double replacement reaction?
 - A. 2 Na + 2 H₂O \rightarrow 2 NaOH + H₂ B. CaCO₃ \rightarrow CaO + CO₂ C. LiOH + HCl \rightarrow LiCl + H₂O D. CH₄ + 2 O₂ \rightarrow CO₂ + 2 H₂O

18. Given the balanced equation:

 $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$

Which type of reaction is represented by this equation?

- A. synthesis B. decomposition
- C. single replacement D. double replacement

18.

17. _____

16. _____

- 19. Which list includes three types of chemical reactions?
 - A. condensation, double replacement, and sublimation
 - B. condensation, solidification, and synthesis
 - C. decomposition, double replacement, and synthesis
 - D. decomposition, solidification, and sublimation

20. Base your answer(s) to the following question(s) on the balanced chemical equation below.

$$2H_2O \rightarrow 2H_2 + O_2$$

What type of reaction does this equation represent?

21. Given the reaction: $Ca + 2H_2O \rightarrow Ca(OH)_2 + H_2$. What is the total number of moles of Ca needed to react completely with 4.0 moles of H₂O?

A. 1.0 B. 2.0 C. 0.50 D. 4.0

22. Given the reaction:

 $CH_4(g) + 2O_2(g) \rightarrow CO_2(g) + 2H_2O(g)$

How many moles of oxygen are needed for the complete combustion of 3.0 moles of $\text{CH}_4(g)$?

A. 6.0 moles B. 2.0 moles C. 3.0 moles D. 4.0 moles

22. _____

21. _____

20.

23. Given the reaction:

 $2Al + 3H_2SO_4 \rightarrow 3H_2 + Al_2(SO_4)_3$

The total number of moles of $\mathrm{H}_2\mathrm{SO}_4$ needed to react completely with 5.0 moles of Al is

A. 2.5 moles B. 5.0 moles C. 7.5 moles D. 9.0 moles	A.	2.5 moles	В.	5.0 moles	C.	7.5 moles	D.	9.0 mol
---	----	-----------	----	-----------	----	-----------	----	---------

24. Given the reaction:

 $Mg + 2HCl \rightarrow MgCl_2 + H_2$

What is the total number of grams of Mg consumed when 0.50 mole of H_2 is produced?

A. 6.0 g B. 12 g C. 3.0 g D. 24 g

25. Given the reaction: $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$. What is the ratio of moles of $H_2(g)$ consumed to moles of $NH_3(g)$ produced?

A. 1:2 B. 2:3 C. 3:2 D. 6:6

24. _____

Problem-Attic format version 4.4.218

© 2011-2014 EducAide Software Licensed for use by Breanna Eng Terms of Use at www.problem-attic.com

В

А

С

В

С

Stoich Review Questions 01/19/2015 1. 21. D Answer: Answer: 2. 22. Answer: D Answer: 3. 23. Answer: D Answer: 4. 24. Answer: С Answer: 5. 25. Answer: А Answer: 6. 1.24 mol Answer: 7. В Answer: 8. Answer: В 9. С Answer: 10. С Answer: 11. Answer: D 12. Answer: А 13. Answer: В 14. С Answer: 15. Answer: D 16. Answer: А 17. Answer: С 18. В Answer: 19. С Answer: 20. decomposition, analysis, redox, Answer: endothermic, electrolysis