

Ex1C151WKSHTS2011

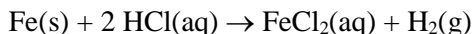
Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. The density of acetic acid is 1.05 g/mL. What is the volume of 275 g of acetic acid?
- 3.46×10^{-3} mL
 - 3.82×10^{-3} mL
 - 2.62×10^2 mL
 - 2.76×10^2 mL
 - 2.89×10^2 mL
- _____ 2. When 12 copper pennies are submerged in water, the pennies displace 4.13 cm³ of water. If the combined mass of the pennies is 36.93 g, what is the density of copper?
- 0.745 g/cm³
 - 3.49 g/cm³
 - 8.94 g/cm³
 - 32.8 g/cm³
 - 153 g/cm³
- _____ 3. A common wavelength of light emitted from a red laser pointer is 6.50×10^2 nm. What is the wavelength in meters?
- 6.50×10^{-9} m
 - 6.50×10^{-7} m
 - 6.50×10^{-5} m
 - 6.50×10^{-3} m
 - 6.50×10^0 m
- _____ 4. If the fuel efficiency of an automobile is 22 miles per gallon, what is its fuel efficiency in kilometers per liter? (1 km = 0.621 mile, 1.000 L = 1.057 quarts, 4 quarts = 1 gallon)
- 3.2 km/L
 - 3.6 km/L
 - 9.4 km/L
 - 32 km/L
 - 52 km/L
- _____ 5. What is the correct answer to the following expression: $(49.1 - 42.61) \times 13.1$?
- 9×10^2
 - 85
 - 85.0
 - 85.02
 - 85.019
- _____ 6. What is the correct answer to the following expression: $3.33 \times 10^{-5} + 8.13 \times 10^{-7}$?
- 3×10^{-5}
 - 3.4×10^{-5}
 - 3.41×10^{-5}
 - 3.411×10^{-5}
 - 3.4113×10^{-5}

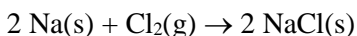
- _____ 7. Which of the following atoms contains the largest number of protons?
- ^{128}Te
 - ^{121}Sb
 - ^{127}I
 - ^{107}Ag
 - ^{112}Cd
- _____ 8. Which two of the atoms below have the same number of neutrons?
- $^{28}_{14}\text{Si}$, $^{28}_{12}\text{Mg}$, $^{28}_{11}\text{Na}$, $^{26}_{12}\text{Mg}$?
- $^{28}_{12}\text{Mg}$ and $^{28}_{11}\text{Na}$
 - $^{26}_{12}\text{Mg}$ and $^{28}_{12}\text{Mg}$
 - $^{28}_{14}\text{Si}$ and $^{28}_{12}\text{Mg}$
 - $^{28}_{14}\text{Si}$ and $^{28}_{11}\text{Na}$
 - $^{28}_{14}\text{Si}$ and $^{26}_{12}\text{Mg}$
- _____ 9. How many electrons are in $^{48}_{22}\text{Ti}^{4+}$?
- 18
 - 22
 - 26
 - 44
 - 52
- _____ 10. A 0.63 g sample of nickel contains _____ atoms.
- 1.1×10^{-2}
 - 6.5×10^{21}
 - 3.8×10^{23}
 - 2.2×10^{25}
 - 5.6×10^{25}
- _____ 11. What is the molar mass of cobalt(II) chloride hexahydrate?
- 94.39 g/mol
 - 202.5 g/mol
 - 237.9 g/mol
 - 135.9 g/mol
 - 129.8 g/mol
- _____ 12. A molecule is found to contain 47.35% C, 10.60% H, and 42.05% O. What is the empirical formula for this molecule?
- $\text{C}_2\text{H}_6\text{O}$
 - $\text{C}_2\text{H}_6\text{O}_2$
 - $\text{C}_3\text{H}_8\text{O}_2$
 - $\text{C}_3\text{H}_6\text{O}_3$
 - $\text{C}_4\text{H}_6\text{O}$

- ___ 13. Iron reacts with hydrochloric acid to produce iron (II) chloride and hydrogen gas.

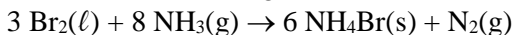


How many moles of HCl will react with 3.5 moles of Fe?

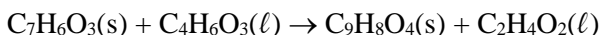
- a. 1.0 mol
 - b. 1.8 mol
 - c. 2.0 mol
 - d. 7.0 mol
 - e. 8.5
- ___ 14. How many moles of sodium chloride can be produced from the reaction of 3.35 moles of sodium with 2.13 moles of chlorine gas?



- a. 1.68 mol
 - b. 2.13 mol
 - c. 3.35 mol
 - d. 4.26 mol
 - e. 5.48 mol
- ___ 15. If 0.205 moles of bromine and 0.600 moles of ammonia react according to the equation below, what is the maximum number of grams of ammonium bromide that can be produced?



- a. 20.1 g
 - b. 40.2 g
 - c. 44.1 g
 - d. 58.8 g
 - e. 121 g
- ___ 16. Aspirin is produced by the reaction of salicylic acid ($M = 138.1 \text{ g/mol}$) and acetic anhydride ($M = 102.1 \text{ g/mol}$).



If 1.02 g of $\text{C}_9\text{H}_8\text{O}_4$ ($M = 180.2 \text{ g/mol}$) is produced from the reaction of 3.00 g $\text{C}_7\text{H}_6\text{O}_3$ and 5.40 g $\text{C}_4\text{H}_6\text{O}_3$, what is the percent yield?

- a. 7.11%
- b. 11.6%
- c. 15.9%
- d. 26.1%
- e. 43.1%

Answer Section

1.	ANS: C	6.	ANS: C	11.	ANS: C
2.	ANS: C	7.	ANS: C	12.	ANS: C
3.	ANS: B	8.	ANS: E	13.	ANS: D
4.	ANS: C	9.	ANS: A	14.	ANS: C
5.	ANS: B	10.	ANS: B	15.	ANS: B
				16.	ANS: D

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Answer Section

MULTIPLE CHOICE

1.	ANS: C
2.	ANS: C
3.	ANS: B
4.	ANS: C
5.	ANS: B
6.	ANS: C
7.	ANS: C
8.	ANS: E
9.	ANS: A
10.	ANS: B
11.	ANS: C
12.	ANS: C
13.	ANS: D
14.	ANS: C
15.	ANS: B
16.	ANS: D