

Questions of the Day Set #6

#62

Which of these compounds contains the highest percent of carbon by mass?

- (A) CO_2 (B) CaCO_3
(C) $\text{Al}_2(\text{CO}_3)_3$ (D) $\text{Mg}(\text{CN})_2$

#64

A compound contains 36.48% sodium, 25.44% sulfur, and 38.08% oxygen. What is the empirical formula for this compound?

- (A) NaSO_3 (B) NaSO_4
(C) Na_2SO_3 (D) Na_2SO_4

#66

What type of equation involves two separate elements combining to form one compound?

- (A) single replacement (B) synthesis
(C) double replacement (D) decomposition

***for explanation, tell how you would recognize the other types**

#68

Which metal will spontaneously react with $\text{Zn}^{+2}(\text{aq})$, but will not spontaneously react with $\text{Mg}^{+2}(\text{aq})$?

- (A) $\text{Mn}(\text{s})$ (B) $\text{Ni}(\text{s})$ (C) $\text{Cu}(\text{s})$ (D) $\text{Ba}(\text{s})$

#70

What is the empirical formula of a compound that consists of 16.4% magnesium, 18.9% nitrogen, and 64.7% oxygen?



#72

Given the balanced equation: $\text{CH}_4 + 2 \text{O}_2 \rightleftharpoons \text{CO}_2 + 2 \text{H}_2\text{O}$
How many moles of water are produced when 2.50 moles of methane (CH_4) are completely reacted?

(A) 2.50

(B) 1.25

(C) 5.00

(D) 7.50