CHEM

Name_____ Class_____ Date_____

1 Given the unbalanced equation:

$$\_\_\_Al(s) + \_\_\_O_2(g) \rightarrow \_\_\_Al_2O_3(s)$$

When this equation is correctly balanced using smallest whole numbers, what is the coefficient of $O_2(g)$?
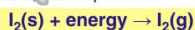
A 6   C 3
B 2   D 4

2 Which **chemical equation** is **correctly** balanced?

A $H_2(g) + O_2(g) \rightarrow H_2O(g)$
B $N_2(g) + H_2(g) \rightarrow NH_3(g)$
C $2NaCl(s) \rightarrow Na(s) + Cl_2(g)$
D $2KCl(s) \rightarrow 2K(s) + Cl_2(g)$

3 Given the balanced equation:
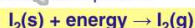
$$I_2(s) + energy \rightarrow I_2(g)$$

As a sample of $I_2(s)$ sublimes to $I_2(g)$, the entropy of the sample

4 Given the balanced equation:

$$2C + 3H_2 \rightarrow C_2H_6$$
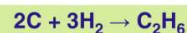
What is the **total number of moles of C**

5

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7
$$C_2H_2 + 2Cl_2 \rightarrow C_2H_2Cl_4$$

This reaction is best **classified** as

A addition
B esterification
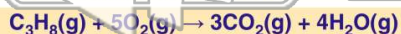C fermentation
D substitution

$$H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$$

What is the **total number of moles of HCl(g) produced** when 3 moles of H2(g) is completely consumed?

A 5 moles   C 3 moles
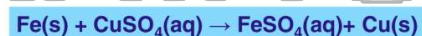B 2 moles   D 6 moles

9 Given the balanced equation:
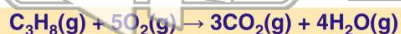
$$C_3H_8(g) + 5O_2(g) \rightarrow 3CO_2(g) + 4H_2O(g)$$

What is the total number of liters of $CO_2(g)$ **produced** when 20.0 liters of $O_2(g)$ are completely consumed?

A 12.0 L   C 3.00 L
B 22.4 L   D 5.00 L

10 Given the balanced equation:

$$Fe(s) + CuSO_4(aq) \rightarrow FeSO_4(aq) + Cu(s)$$

What **total mass of iron** is necessary to produce **1.00 mole of copper**?

A 26.0 g   C 112 g
B 55.8 g   D 192 g

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C   D

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As a sample of $I_2(s)$ sublimes to $I_2(g)$, the entropy of the sample

4 Given the balanced equation:

$$2C + 3H_2 \rightarrow C_2H_6$$

What is the **total number of moles of C**

D

5   C

7

$$C_2H_2 + 2Cl_2 \rightarrow C_2H_2Cl_4$$

This reaction is best **classified** as

A addition
B esterification
C fermentation
D substitution

A

$$H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$$

What is the **total number of moles of HCl(g) produced** when 3 moles of H2(g) is completely consumed?

A 5 moles   C 3 moles
B 2 moles   D 6 moles

D

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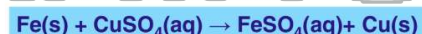
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