Chemistry Quiz
Name_____

Please answer on an 882-E scantron. Please put your name on your scantron. Assume reactions are not balanced.

1. In the reaction: $Cr_{(s)} + S_{8(s)} \Rightarrow Cr_2S_{3(s)}$, How many grams of Sulfur compound are needed to make 385 grams of $Cr_2S_{3(s)}$?
(A)385.00g (C) 185.00 g
(B) 61.44 g (D) 144.38 g

2. If 58.00 grams of $Cr_2S_{3(s)}$ in the above reaction was recovered, what would be the percent yield of the reaction ?
(A) 94.5%
(B) 37.5%
(C) 48.0%
(D) 15.0%

3. How many grams of Chromium would be needed in the above reaction in Question #1 to make 385 grams of product?
(A) 100 grams
(B) 200 grams
(C) 300 grams
(D) 185 grams

4. In the reaction of $Ca(OH)_{2(s)} + HNO_3 \Rightarrow ? + ?$, how many grams Nitric acid will be required to completely neutralize 100 grams of Calcium Hydroxide? (need to balance)
(A) 55.19g (C) 110.38g
(B) 220.77 g (D) 63.02g

5. In the reaction: $Al + CuSO_4 \rightarrow Cu + Al_2(SO_4)_3$

What is the percent yield if you experimentally produce 3.65 grams of copper when 1.87 grams of Aluminum reacts with 9.65 grams of Copper (II) Sulfate?
(A) 51.23% (C) 37.8%
(B) 95.7% (D) 55.23%

6) How many grams of fluorine are required to produce 20.0 grams of FeF_3 from the reaction shown?

$$2\ Fe + 3F_2 \rightarrow 2\ FeF_3$$

A) 4.49 g B) 5.05 g C) 6.74 g
D) 10.1 g E) 20.2 g

7) How many grams of C will be consumed when 5.00 grams of Na_2SO_4 react according to the balanced reaction shown?

$$Na_2SO_4 + 2\ C \rightarrow Na_2S + 2\ CO_2$$

A) 0.038 g
B) 0.211 g
C) 0.844 g
D) 1.69 g
E) 17.1 g

8) How many moles of CO_2 are produced when 2.5 moles of O_2 react according to the following equation? (balance)

$$C_3H_5 + O_2 \rightarrow CO_2 + H_2O$$

A) 1.5
B) 3
C) 5
D) 6
E) 18

9. If you have 0.05 moles of Aluminum Hydroxide, how many moles of Aluminum Sulfate can you produce, theoretically?

Aluminum Hydroxide + sulfuric acid → water + Aluminum Sulfate

(A) 0.05 moles
(B) 0.10 moles
(C) 0.15 moles
(D) 0.20 moles

10. In the reaction: $CaCO_3 \rightarrow CaO + CO_2$

Calculate the theoretical yield of Calcium Oxide if 24.8 grams of Calcium Carbonate decomposes?

(A) 10.9 g
(B) 13.9 g
(C) 16.9 g
(D) 24.8 g