

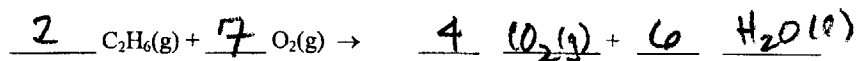
Name: Key

Section: \_\_\_\_\_

1. (2 points) Give the name or formula for the following:

(a)  $\text{Cu}_3\text{N}_2$  Copper (II) nitride (b) aluminum acetate  $\text{Al}(\text{C}_2\text{H}_3\text{O}_2)_3$

2. (3 points) Balance the following reaction: (Your lab instructor will sell you the products for 1 point)  
(include all (s), (g), (l) or (aq) where appropriate)



3. (2 points) Which of the following molecules is polar? *circle your choice(s)*

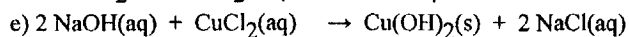
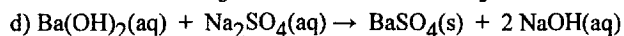
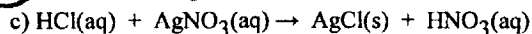
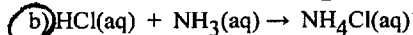
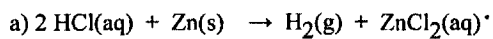
$\text{CO}_2$

$\text{H}_2\text{O}$

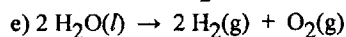
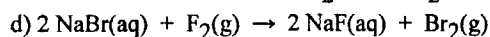
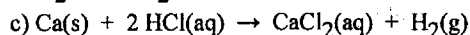
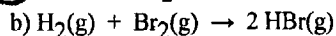
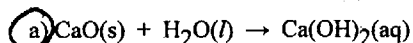
$\text{Br}_2$

$\text{HF}$

4. (2 points) Which of the following chemical equations is an acid-base reaction? *circle your choice(s)*

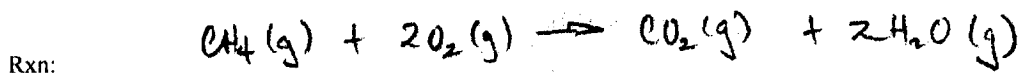


5. (2 points) All of the following are oxidation-reduction reactions EXCEPT *circle your choice(s)*



6. (4 points) What mass of  $\text{O}_2(\text{g})$  is required to completely react with 20.3 g of methane ( $\text{CH}_4(\text{g})$ ).

*hint... you need a balanced reaction to start and there is help on this page!!*



$$20.3 \text{g CH}_4 \times \frac{1 \text{ mol CH}_4}{16.04 \text{g}} \times \frac{2 \text{ mol O}_2}{1 \text{ mol CH}_4} \times \frac{32.00 \text{g O}_2}{1 \text{ mol O}_2} = \underline{\underline{81.0 \text{g O}_2}}$$

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