

Name: _____ Date: _____ Period: _____

Task: Use the Law of Conservation of Mass to fill out the missing information in the table below. Use example #1 as a guide.

Mass of Reactants = Mass of Products

REACTION	Reactant(s)		Product(s)	
1	H ₂	O ₂	H ₂ O	
mass	3.4g	10g	13.4g	
2	CH	O ₂	CO ₂	H ₂ O
mass	14.4g	40.0g		15.0g
3	HgO		Hg	O ₂
mass	33.6g			18.3g
4	Li	O ₂	Li ₂ O	
mass		10.8g	34.6g	
5	C ₃ H ₆	O ₂	CO ₂	H ₂ O
mass	20.0g		34.2g	12.8g
6	Al(OH) ₃		Al ₂ O ₃	H ₂ O
mass			41.8g	15.6g
7	Zn	HCl	ZnCl ₂	H ₂
mass	34g	55g		10g
8	H ₂ O ₂		H ₂ O	O ₂
mass	85g			44g
9	CH ₄	O ₂	CO ₂	H ₂ O
mass	120g	33g		65g
10	Na	Cl ₂	NaCl	
mass	44g	45g		

Answer the word problems below using the Law of Conservation of Mass.

11. Hydrogen and oxygen react chemically to form water. How much water would form if 24.6 grams of hydrogen reacted with 33.6 grams of oxygen? ($\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$)

12. When ammonium nitrate (NH_4NO_3) explodes, the products are nitrogen, oxygen, and water. When 55 grams of ammonium nitrate explode, 22 grams of nitrogen and 10 grams of oxygen are formed. How many grams of water is produced? ($\text{NH}_4\text{NO}_3 \rightarrow \text{N}_2 + \text{O}_2 + \text{H}_2\text{O}$)