Unit 6D Practice Problems III
Mole to Mole and Mole to Mass Calculations

Name:

Date:

Tin (II) fluoride, SnF_2, is found in some toothpastes. Tin (II) fluoride is made by reacting solid tin with hydrogen fluoride according to the following BALANCED equation.

$$2\ Sn\ (s) + 2\ HF\ (g) \rightarrow SnF_2\ (s) + H_2\ (g)$$

1. How many moles of tin are needed to react with 3.5 moles of hydrogen fluoride?

2. How many grams of hydrogen gas will be produced if 2.5 moles of tin react?

3. How many moles of tin (II) fluoride will be produced if 12.6 grams of hydrogen fluoride react?

Glucose is produced in plants through the process of photosynthesis according to the following BALANCED equation.

$$6\ CO_2\ (g) + 6\ H_2O\ (l) \rightarrow C_6H_{12}O_6\ (aq) + 6\ O_2\ (g)$$

4. What mass of glucose will be produced if 10 moles of carbon dioxide react?

5. How many grams of hydrogen gas will be produced if 2.5 moles of tin react?

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