

## Stoichiometry Worksheet

**ham + 2 bread → sandwich**



- 1) If you have two-dozen pieces of bread, how many dozen sandwiches can be made? How many dozen pieces of ham are required?

If you have two-dozen S atoms, how many dozen CS<sub>2</sub> molecules can be made? How many dozen C atoms are required?

If you have two moles of S atoms, how many moles of CS<sub>2</sub> molecules can be made? How many moles of C atoms are required?

- 2) If you have half a dozen pieces of ham and four dozen pieces of bread, how many dozen sandwiches can be made? Will anything be leftover?

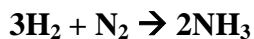
If you have 0.5 dozen C atoms and 4 dozen S atoms, how many dozen CS<sub>2</sub> molecules can be made? Will anything be leftover?

If you have 0.5 moles C and 4 moles S, how many moles of CS<sub>2</sub> can be made? Will anything be leftover?

- 3) If you have 2.5 dozen pieces of ham and 3 dozen pieces of bread, how many sandwiches can be made? Will anything be leftover?

If you have 2.5 moles C and 3 moles S, how many moles of CS<sub>2</sub> can be made? Will anything be leftover?

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4) If you have 0.36 moles of  $\text{H}_2$  and 0.15 moles of  $\text{N}_2$ , how many moles of  $\text{NH}_3$  can be formed? What will be leftover?

5) If you have 10 g of  $\text{H}_2$  and 35 g of  $\text{N}_2$  how many grams of  $\text{NH}_3$  can be formed?

### Answers

- 1) 1 dozen sandwiches, 1 dozen ham  
1 dozen  $\text{CS}_2$ , 1 dozen C  
1 mole  $\text{CS}_2$ , 1 mole C
- 2)  $\frac{1}{2}$  dozen sandwiches, 3 dozen bread leftover  
 $\frac{1}{2}$  dozen  $\text{CS}_2$ , 3 dozen S leftover  
 $\frac{1}{2}$  mole  $\text{CS}_2$ , 3 moles S leftover
- 3) 1.5 dozen sandwiches, 1 dozen ham leftover  
1.5 moles  $\text{CS}_2$ , 1 mole C leftover
- 4) 0.24 moles  $\text{NH}_3$ , 0.03 moles  $\text{N}_2$  leftover
- 5) 42.5 grams  $\text{NH}_3$