$$\textbf{Percent Yield} = \frac{\text{experimental yield}}{\text{theoretical yield}} \times 100$$

Experimental yield = lab results

Theoretical yield = stoichiometry (BCA) answer

Example) When 125.0 grams of ZnS (LR) react with excess O_2, according to the equation below, 76.4 grams of SO_2 are formed in lab. What is the percent yield of SO_2?

$2\ ZnS\ (s) + 3\ O_2\ (g) \rightarrow 2\ ZnO\ (s) + 2\ SO_2\ (g)$

Example) When 125.0 grams of ZnS react with excess O_2, according to the equation below, 76.4 grams of SO_2 are formed in lab. What is the percent yield of SO_2? (experimental)

$2\ ZnS\ (s) + 3\ O_2\ (g) \rightarrow 2\ ZnO\ (s) + 2\ SO_2\ (g)$

B				
C	1.283 mol			$1.283\left(\frac{2}{2}\right) = 1.283$ mol
A				

$$\frac{125\text{ g ZnS}}{1}\left|\frac{1\text{ mol ZnS}}{97.46\text{ g ZnS}}\right. = 1.283\text{ mol ZnS}$$

$$\frac{1.283\text{ mol SO}_2}{1}\left|\frac{64.07\text{ g SO}_2}{1\text{ mol SO}_2}\right.$$

theoretical

$$= 82.20\text{ g SO}_2$$

$$\% \text{ yield} = \frac{\text{experimental}}{\text{theoretical}} \times 100$$

$$\% \text{ yield} = \frac{76.4 \text{ g } SO_2}{82.20 \text{ g } SO_2} \times 100$$

$$\% \text{ yield} = \boxed{92.9\ \%}$$