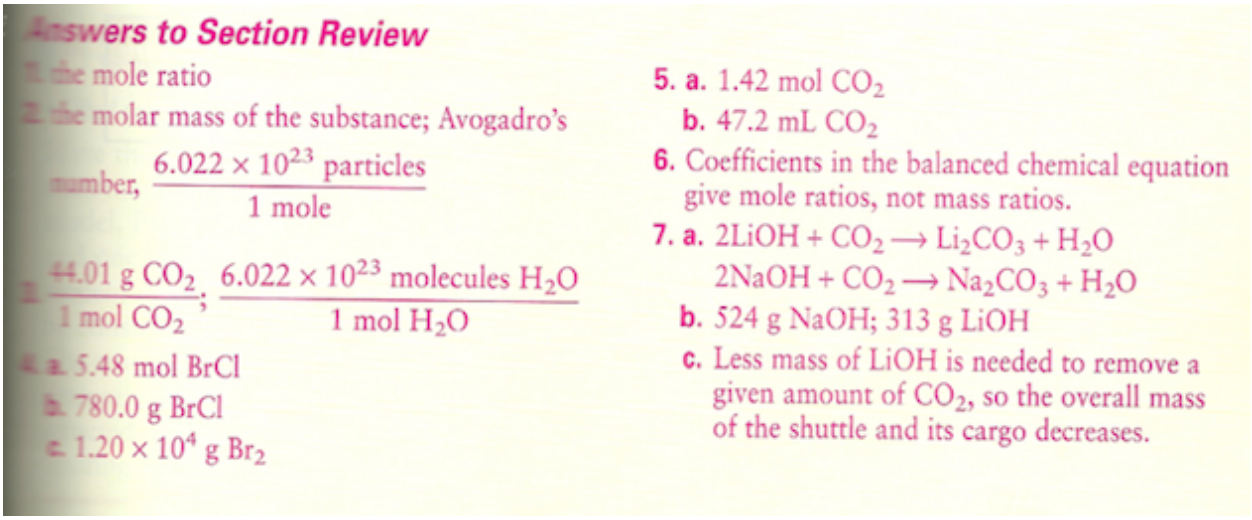
Answers to section review in page 311



Answers to Section Review

1. the mole ratio
2. the molar mass of the substance; Avogadro's number, $\frac{6.022 \times 10^{23} \text{ particles}}{1 \text{ mole}}$
3. $\frac{44.01 \text{ g } CO_2}{1 \text{ mol } CO_2}$; $\frac{6.022 \times 10^{23} \text{ molecules } H_2O}{1 \text{ mol } H_2O}$
4. a. 5.48 mol BrCl
   b. 780.0 g BrCl
   c. 1.20×10^4 g Br_2
5. a. 1.42 mol CO_2
   b. 47.2 mL CO_2
6. Coefficients in the balanced chemical equation give mole ratios, not mass ratios.
7. a. $2LiOH + CO_2 \longrightarrow Li_2CO_3 + H_2O$
   $2NaOH + CO_2 \longrightarrow Na_2CO_3 + H_2O$
   b. 524 g NaOH; 313 g LiOH
   c. Less mass of LiOH is needed to remove a given amount of CO_2, so the overall mass of the shuttle and its cargo decreases.