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| CHAPTER 7 | Launch Lab: The Thermal Decomposition of Baking Soda Answer Key | BLM 7.0.9A |
| ANSWER KEY | | |
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Answers to Analysis Questions



2. Using the mass of baking soda suggested in the lab, moles of sodium hydrogen carbonate used =

$$\frac{3.00 \text{ g}}{84.01 \frac{\text{g}}{\text{mol}}} = 0.0357 \text{ mol (to the correct number of significant digits).}$$

The mass of sodium carbonate obtained ideally would be approximately 2.00 g.

$$\text{Moles of sodium carbonate produced} = \frac{2.00 \text{ g}}{105.99 \frac{\text{g}}{\text{mol}}} = 0.0189 \text{ mol}$$

3. The ratio is 1.89:1, or approximately 2:1.
4. The ratio calculated in Question 3 is the mole ratio, or the ratio of the whole number coefficients from the balanced chemical equation.