Answers to Practice Problems D in page 311

Answers to Practice Problems D

1. 2.89×10^{24} molecules BrF₅ 2. 2.22×10^{19} molecules Br₂



Additional Practice

 If 2.46 × 10²⁵ molecules of chlorine react completely, how many grams of NaCl will form?

 $2Na(s) + Cl_2(g) \rightarrow 2NaCl(s)$

Ans. 4.77 × 103 g NaCl

 How many molecules of carbon dioxide are produced when 79.5 g of K₂CO₃ decompose?

 $K_2CO_3(s) \rightarrow K_2O(s) + CO_2(g)$ Ans. 3.46×10^{23} molecules CO_2

 How many water molecules form from the complete combustion of 1.129 × 10²⁴ molecules C₄H₁₀?

 $\begin{array}{l} 2\mathrm{C}_{4}\mathrm{H}_{10}(g) + 13\mathrm{O}_{2}(g) \rightarrow \\ 8\mathrm{CO}_{2}(g) + 10\mathrm{H}_{2}\mathrm{O}(l) \end{array}$

Ans. 5.645 × 10²⁴ molecules H₂O Logical