# Answers to Practice Problems I in page 247 

## Answers to Practice

Problems I

1. $93.311 \% \mathrm{Fe}, 6.689 \% \mathrm{C}$
2. $50.05 \% \mathrm{~S}, 49.95 \% \mathrm{O}$
3. $35.00 \% \mathrm{~N}, 5.05 \% \mathrm{H}$, 59.96\% O
4. a. $35.41 \% \mathrm{Sr}, 64.59 \% \mathrm{Br}$
b. $29.44 \% \mathrm{Ca}, 23.55 \% \mathrm{~S}$, 47.01\% O
c. $31.83 \% \mathrm{Mg}, 31.46 \% \mathrm{C}$, $36.70 \% \mathrm{~N}$
d. $63.70 \% \mathrm{~Pb}, 14.77 \% \mathrm{C}$, $1.86 \% \mathrm{H}, 19.67 \% \mathrm{O}$
5. a. Both are $39.99 \% \mathrm{C}, 6.73 \% \mathrm{H}$, and $53.28 \% \mathrm{O}$ because, if you combine the hydrogen atoms in acetic acid, the empirical formulas are the same.
b. The percentage composition of the empirical formula is the same as that of the molecular formulas.

Homework -Ginsal
Additional Practice Determine the percentage compositions of the following compounds:

1. NaClO Ans. $30.88 \% \mathrm{Na}$, $47.62 \% \mathrm{Cl}, 21.49 \% \mathrm{O}$
2. $\mathrm{H}_{2} \mathrm{SO}_{3}$ Ans. $2.46 \% \mathrm{H}, 39.07 \% \mathrm{~S}$, $58.47 \% \mathrm{O}$
3. $\mathrm{C}_{2} \mathrm{H}_{5} \mathrm{COOH}$ Ans. $48.63 \% \mathrm{C}$, 8.18\% H, 43.19\% O
[S. Logical
