## Answers to practice Problems E, page 235

### Answers to Practice Problems E

1. (68.926 amu)(0.6000) + (70.925 amu)(0.4000) = 69.73 amu
2. (15.99 amu)(0.9976) + (17.00 amu)(0.00038) + (18.00 amu)(0.0020) = 15.99 amu

### Homework — GENERAL

**Additional Practice**

1. Chlorine exists as chlorine-35, which has a mass of 34.969 amu and makes up 75.8% of chlorine atoms. The rest of naturally occurring chlorine is chlorine-37, with a mass of 36.996 amu. What is the average atomic mass of chlorine? Ans. 35.5 amu
2. U-234 makes up 0.00500% of uranium atoms and has a mass of 234.041 amu. U-235 makes up 0.720% and has a mass of 235.044 amu. U-238 has a mass of 238.051 amu and makes up 99.275%. What is the average atomic mass of uranium? Ans. 238.03 amu
3. Carbon-12 makes up 98.90% of existing carbon. Carbon-13, with a mass of 13.003, makes up 1.10%. Traces of carbon-14 also exist. What is the average atomic mass of carbon? Ans. 12.01 amu