## Answers to practice problems page 108

39. 54
40. 80
41. 9
42. 33
43. a. ${ }_{92}^{234} \mathrm{U}$
b. ${ }^{235} \mathrm{U} \mathrm{U}$
c. ${ }_{92}^{238} \mathrm{U}$
44. 

| Isotope | Number <br> of <br> protons | Number <br> of <br> electrons | Number <br> of <br> neutrons |
| :--- | :---: | :---: | :---: |
| $\mathrm{Si}-28$ | 14 | 14 | 14 |
| $\mathrm{Si}-29$ | 14 | 14 | 15 |
| $\mathrm{Si}-30$ | 14 | 14 | 16 |

45. ${ }_{6}^{12} \mathrm{C}$ and ${ }_{6}^{13} \mathrm{C}$
46. ${ }_{56}^{130} \mathrm{Ba}$ and ${ }_{56}^{137} \mathrm{Ba}$
