

Average Atomic Mass Worksheet

Chemistry Chapter 4

1 point

Name: _____

Date: _____ Hour: _____

Determine the average atomic mass of the following mixtures of isotopes. **Show your work!!**

- 1) 98.9% carbon-12
1.1% carbon-13

a) Answer: _____

b) Periodic Table Answer:

- 2) 5.8% iron-54
91.7% iron-56
2.2% iron-57
0.3% iron-58

a) Answer: _____

b) Periodic Table Answer:

- 3) 72.2% rubidium-85
27.8% rubidium-87

a) Answer: _____

b) Periodic Table Answer:

- 4) What is the average atomic mass of silver if 51.84% of silver atoms have a mass number of 107 and 48.16% of them have a mass number of 109?

- 5) What is the average atomic mass of the element copper if it is composed of 69.17% of copper-63 and 30.83% of copper-65?

- 6) Nitrogen has two naturally-occurring isotopes, ^{14}N and ^{15}N .

- (a) What is the average atomic mass of nitrogen on the periodic table? _____
(b) Which of the two isotopes do you predict is more abundant in nature (has a higher percent)? Give a reason for your prediction.