Worth the Weight – October 22, 2018

Problems
Margo has some coins consisting of only pennies and nickels. These coins have a combined weight of 1500 g that is evenly distributed between the two types of coins. If each penny weighs 2.5 g and each nickel weighs 5 g, what is the total value of Margo’s coins?

One common misconception is that a penny is primarily composed of copper, based on appearance. In fact, a penny is 2.5% copper and 97.5% zinc. One might also think that a nickel is composed of nickel mostly. However, a nickel is 25% nickel and 75% copper. What percent of the total weight of Margo’s coins is copper? Express your answer as a percent to the nearest hundredth.

Constance has some coins, also consisting only of pennies and nickels. Her coins also have a combined weight of 1500 g, but Constance has an equal number of pennies and nickels. What is the absolute difference between the total value of Margo’s coins and the total value of Constance’s coins?