

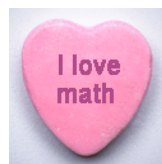


Sweethearts Candy

You have probably seen or tried these popular candies each year around Valentine's Day. Did you know that they have been produced, sold and consumed since the 1860's? About 8 billion of these Sweetheart candies are produced each year; which is enough candy to stretch from Rome, Italy to Valentine, Arizona 20 times and back again. To meet the demand for its Conversation Hearts, NECCO produces them from late February through mid-January for the following year. The entire production - about 100,000 pounds a day (they don't produce candy on Sundays) - sells out in the six weeks around Valentine's Day.

1. According to the reading NECCO makes about 100,000 pounds of candy hearts a day for 11 months. About how many pounds of candy hearts is that per month? How many pounds is this for all 11 months? Show or explain your solution method.
2. According to the reading NECCO sells all of their candy hearts in the six weeks around Valentine's Day. On average about how many pounds of candy hearts are they selling each day during those six weeks?
3. About how much does one candy heart weigh? You can use your answer to problem one (the total number of pounds of hearts produced in 11 months and the fact that NECCO produces about 8 billion hearts in those 11 months of production to determine the weight of one candy heart. You can also use the fact that there are about 36 candies in a one ounce box. There are 16 ounces in a pound. So there are two ways to determine an estimate of the weight of a Sweetheart candy. I wonder if each way will get you roughly the same answer. Try to determine the weight of one Sweetheart candy now.
4. A one ounce box contains about 36 candies. A typical price per box might be about \$0.75. At this price about how much does one sweetheart candy cost?

5. Using your cost per candy from the last problem, about how much are all 8 billion candy hearts worth?
6. After Valentine's Day these candy hearts sell for as cheap as \$0.25 per box. At this price about how much is each candy worth?
7. Using your cost per candy from the last problem, about how much are all 8 billion candy hearts worth?
8. What is the difference in values between the 8 billion Sweetheart candies in problems five and seven? Do you think most of these candies are sold before or after Valentine's Day? When do you think the companies selling and producing this candy prefer it to be sold?
9. So some candy hearts are sold at the pre-Valentine's Day price and some are sold at the less expensive post Valentine's Day price. What would you say is the average value of a Sweetheart candy and then using that value, what could be a rough estimate of the value of the 8 billion Sweetheart candies that NECCO produces each year? Show and explain your reasoning and solution.



Happy Valentine's Day!

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Sources: http://candy.about.com/od/thecandyindustry/a/vday_trivia.htm
<http://www.necco.com/ourbrands/default.asp?brandid=8>
<http://www.fastcompany.com/magazine/43/necco.html>