

Composition of Compounds 1

How Much Candy is in that Candy Bar?

INFORMATION

A new candy company, Q&Q-Jupiter Company, Inc., has released a brand new product called the Fabuloso Bar. The bar contains all of the greatest imaginable childhood ingredients – caramel, cotton candy, sour-gummy worms, peanuts, nougat, crunchy cookie bars, and, of course, rich milk chocolate. Needless to say, they're selling like crazy.

Q&Q also has a much simpler product, their current best-seller, the Kooky Kookie Bar, which is simply a crunchy peanut-butter cookie covered with milk chocolate. The total mass of a Kooky Kookie Bar is 200.0 grams.



Key Questions

1. Is it possible for the cookie portion or the chocolate portion of the Kooky Kookie Bar to have a mass greater than 200.0 grams? Can either be equal to 200.0 grams?
2. If the chocolate portion of a Kooky Kookie Bar has an actual mass of 80.0 grams, what is the mass of the peanut butter cookie portion?
3. What percentage of the total mass does the cookie portion of a Kooky Kookie Bar represent?
4. The Fabuloso Bar is a monster of a snack, massing in at a whopping 300.0 grams. Given the following data:

Ingredient	Ingredient Mass
Caramel	30.0 g
Cotton Candy	15.0 g
Sour-Gummy Worms	75.0 g
Peanuts	15.0 g
Nougat	45.0 g
Crunchy Cookie Bars	60.0 g

What mass is represented by the chocolate? What is the percentage of the total mass that each ingredient represents?

5. One of Q&Q's competitors makes a product called the Car-P Coconut Bar. The bar is 31.3% chocolate, 16.2% caramel, 27.0% peanuts, and 25.5% coconut. The bar has a mass of 121.1 g. What is the mass of each of the ingredients?