

Ratios & Fractions Worksheet

A food company that produces peanut butter decides to try out a new version of its peanut butter that is extra crunchy, using twice the number of peanut chunks as normal. The company hosts a sampling of its new product at grocery stores and finds that 5 out of every 9 customers prefer the new extra crunchy version.

- a. Let's make a list of ratios that might be relevant for this situation.
 - i. The ratio of number preferring new extra crunchy to total number surveyed is _____.
 - ii. The ratio of number preferring regular crunchy to the total number surveyed is _____.
 - iii. The ratio of number preferring regular crunchy to number preferring new extra crunchy is _____.
 - iv. The ratio of number preferring new extra crunchy to number preferring regular crunchy is _____.

- b. Let's use the value of each ratio to make multiplicative comparisons for each of the ratios we described here.
 - i. The number preferring new extra crunchy is _____ of the total number surveyed.
 - ii. The number preferring regular crunchy is _____ of the total number surveyed.
 - iii. The number preferring regular crunchy is _____ of those preferring new extra crunchy.
 - iv. The number preferring new extra crunchy is _____ of those preferring regular crunchy.

- c. If the company is planning to produce 90,000 containers of crunchy peanut butter, how many of these containers should be the new extra crunchy variety, and how many of these containers should be the regular crunchy peanut butter? What would be helpful in solving this problem? Does one of our comparison statements above help us?

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A food company that produces peanut butter decides to try out a new version of its peanut butter that is extra crunchy, using twice the number of peanut chunks as normal. The company hosts a sampling of its new product at grocery stores and finds that 5 out of every 9 customers prefer the new extra crunchy version.

- a. Let's make a list of ratios that might be relevant for this situation.
 - i. The ratio of number preferring new extra crunchy to total number surveyed is 5 to 9.
 - ii. The ratio of number preferring regular crunchy to the total number surveyed is 4 to 9.
 - iii. The ratio of number preferring regular crunchy to number preferring new extra crunchy is 4 to 5.
 - iv. The ratio of number preferring new extra crunchy to number preferring regular crunchy is 5 to 4.

- b. Let's use the value of each ratio to make multiplicative comparisons for each of the ratios we described here.
 - i. The number preferring new extra crunchy is $\frac{5}{9}$ of the total number surveyed.
 - ii. The number preferring regular crunchy is $\frac{4}{9}$ of the total number surveyed.
 - iii. The number preferring regular crunchy is $\frac{4}{5}$ of those preferring new extra crunchy.
 - iv. The number preferring new extra crunchy is $\frac{5}{4}$ of those preferring regular crunchy.

- c. If the company is planning to produce 90,000 containers of crunchy peanut butter, how many of these containers should be the new extra crunchy variety, and how many of these containers should be the regular crunchy peanut butter? What would be helpful in solving this problem? Does one of our comparison statements above help us?

The company should produce 50,000 containers of new crunchy peanut butter and 40,000 containers of regular crunchy peanut butter.

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