Fraction Model Activity

*Jack and Sam are ordering a pizza for their after school club. There are 8 members total in the club. Jack claims that they should order a large round pizza which has 12 slices and each member would get 1 slice. The remaining 4 slices would then be split into each 8 pieces. Jack claims, “Each person will get 150% of a slice of pizza.”*

*Sam is skeptical of Jack’s math skills. He argues, “How can anybody eat more than 100% of something?” Sam has the idea to order the large round pizza with 12 slices and cut each each slice in 2, giving a total of 24 slices. “This way each person can eat three slices of pizza!”*

Which way do you think is better to cut the pizza? Will Sam’s method of giving three slices allow each person to eat more pizza? Is it possible to give a person “150% of a slice of pizza”?

Here are a few hints for using the Fraction Model website.

* In the fraction model, begin by choosing which visual representation you would like to use. There are four options in the bottom right hand corner: length, area, region, and set.
* To change the numerator or denominator you can click on the “+” or “-“ keys, drag the pointer or type in a new value. Try making a few changes.
* If you want to save a fraction to view later, you can add it to the column on the right hand side by clicking the “+” key above the chart.

1. What happens to the visual model when you increase only the numerator?
2. What happens to the percent and decimal as you increase the numerator?
3. What happens to the visual model when you increase only the denominator?
4. What happens to the percent and decimal as you increase the denominator?
5. Try creating a percent that is larger than 100%. What is true about the numerator and denominator?
6. What types of decimals give you a percent greater than 100%?

Jack wanted to split the pizza into 12 slices. Can you create a model that shows this? Draw it below and shade in the pieces that Jack indicated a single person would get.

Sam wanted to split the pizza into 24 slices. Create this model and draw it below, shading in what Sam indicated each person would get.

Compare the two models. Which one gives more pizza to a club member?