CSUN SHINE

What Really Works in Education

Fractions: Pizzas versus Strip Diagrams
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Take-away

At your leisure, try to solve these problems using a circle model for fractions, using (pre-)algebra and using strip diagrams. What are the advantages and disadvantages of each approach?

1. Jo withdrew 3/10 of her savings from the bank. She spent $360 and had $90 left. The next month she deposited ½ of her salary into her savings account and as a result she had $2,750 in her savings account. How much money did she have after after withdrawing 3/10 of her savings? What is here her monthly salary?

2. In Merryville, 3/5 of the women are married to 2/3 of the men. What fraction of the people in Merryville are married?

3. Al and Bo had the same amount of money each. After Al spent $73 and Bo spent $52 the ratio of Al's money to Bo's money is 2:3. How much money did they have to begin with?

4. One evening, Mama baked a large batch of cookies for her family, which consisted of Papa and their three children: Ed, Lisa, and Judy. During the night, Papa got up and ate 1/3 of the cookies. He then (separate from the 1/3) gave one cookie to the family dog, Spike.

The oldest son, Ed was the next to get up. He planned to eat 1/4 of the cookies, but when he separated them into 4 piles, he saw there were 3 cookies left over. He decided to feed those 3 cookies to Spike. Ed then ate the original planned 1/4 of the cookies.

Lisa awoke next and gobbled down 1/3 of the remaining cookies. Before going back to bed, Lisa gave 2 cookies to Spike.

The last family member to awaken and visit the kitchen was young Judy. She ate 8 cookies and then gave 1/8 of what was left to Spike.

The next morning Mama noticed there were only 14 cookies left! She ate 2, gave 2 to Spike, and then split the remaining pastries evenly for her whole family, (5 people in all: Mama, Papa, Ed, Lisa, and Judy) to have for
breakfast.

How many cookies did everyone and every dog eat?

Email me at michael.neubauer@csun.edu with solutions, comments, questions.