



It's your first day on the job at the inn in town, and your job is to be a server at the king's meals. This means that you'll have to divide up the food between the king and his guests at each meal. Sometimes the king likes to eat with just his family, but sometimes it's the entire court.

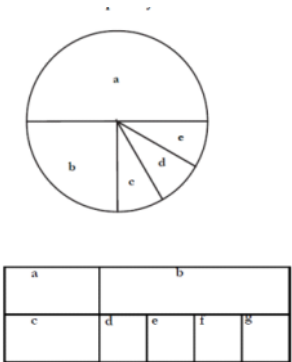
Beginning of the game: intro to fractions  
For practice, the friendly head chef shows you how to divide up a meal between you and him into halves  
Half of the pasta, half of the green beans...  
Then you start to serve the king  
Dividing sets of objects as well as whole objects  
Divide up the meal so that each person gets 2 pancakes and 1 apple  
Divide it up so that everyone gets one scoop of whipped cream on top  
Three strawberries for everyone apple? (ratios?)  
Divide up one whole sheet of coffee cake into appropriate sized pieces  
Then at the next meal, the king has a different number of people but wants just the same portions that he had last week.  
Divide it up using equivalent fractions.  
Or, wants smaller pieces but same amount

At the meal, some people want more, some less -- give them right fractions  
Finally, you get promoted and get to start working in the kitchens.

First, you are just a go between, giving the ingredients prepared by the prep chefs to the cooks.  
This means that you have to line them up on the counter/number line in order. If they are out of order, the recipe goes bad and the cooks get mad at you, have to go back to the prep chefs.  
Next promotion: you are the prep chef

<http://www.conceptuamath.com/fractions.html>

Additional possibility:  
When doing recipes, integrate fractions into how far -- progress  
Have chef keep asking, how much longer -- if whole recipe takes 60 minutes, there are 6 steps, and you have completed 1 --> 1/6 of the way through, about 50 more minutes



1. Margo and Jose shared a couple of large pizzas. Margo ate  $\frac{1}{2}$  of a pizza. Jose ate  $\frac{1}{3}$  of a pizza. What did Jose eat? Explain how you know.

Simple Egg Casserole

- 1 small green bell pepper, finely chopped
- 1 small red bell pepper, finely chopped
- 2 tablespoons oil
- 6 eggs, beaten
- 1 tablespoon flour
- 2/3 cup milk
- 1/2 cup cheddar cheese, shredded
- salt and pepper to taste
- 1/2 cup bread crumbs

Cook bell peppers in 1 tablespoon oil in a large skillet until tender. Beat eggs and add to skillet. Cook on medium heat until edges start to cook, then lift mixture in the center with a spatula to let the uncooked egg mixture cook. Lift and fold until egg mixture is cooked (just like making scrambled eggs). Pour into a 9X13 casserole dish.

In a small saucepan, add the rest of the oil, milk, and cheese and some salt and pepper to taste. Once thick and bubbly, pour into the casserole dish on top of the eggs. Sprinkle bread crumbs on top. Bake in a 350F degree oven for 10 to 15 minutes.

Ingredients

- 1 tablespoon extra virgin olive oil
- 2 (10 ounce) packages frozen chopped spinach
- 1/3 onion, chopped
- 1/2 teaspoon dried oregano
- 1/2 teaspoon dried basil
- 2 cloves garlic, crushed
- 1 (32 ounce) jar spaghetti sauce
- 1 1/2 cups water
- 2 cups non-fat cottage cheese
- 1 (8 ounce) package part skim mozzarella cheese, shredded
- 1/4 cup grated Parmesan cheese
- 1/2 cup chopped fresh parsley
- 1 teaspoon salt
- 1/8 teaspoon black pepper
- 1 egg
- 8 ounces lasagna noodles

Directions

1. Preheat oven to 350 degrees F (175 degrees C).
2. In a large pot over medium heat saute spinach, onion, oregano, basil and garlic in the olive oil. Pour in spaghetti sauce and water; simmer 20 minutes. In a large bowl mix cottage cheese, mozzarella cheese, Parmesan cheese, parsley, salt, pepper and egg.
3. Place a small amount of sauce in the bottom of a lasagna pan. Place 4 uncooked noodles on top of sauce and top with layer of sauce. Add 4 more noodles and layer with 1/2 sauce and 1/2 cheese mixture, noodles and repeat until all is layered, finishing with sauce.
4. Cover with foil and bake in a preheated oven for 35 minutes. Remove foil and bake another 15 minutes. Let sit 10 minutes before serving.

Recipes:

- Soup
- Pasta
- Fruit salad?
- Vegetables
- Cake
- Pie
- Casserole

<http://home.ewanta.com/~math/FOINTRO.HTM>

Intro to fractions

- Identify the components of a fraction.
- Compare and order fractions with like denominators.
- Compare and order fractions with like numerators.
- Write equivalent fractions.
- Find the prime factors of a number.
- Write a fraction in its simplest form.
- Use prime factorizations to find the least common denominator (LCD) of a group of fractions.
- Compare and order fractions.
- Multiply two fractions.
- Divide two fractions.
- Add two fractions.
- Subtract two fractions.

- Components -- numerator, denominator, bigger denominator --> smaller pieces
  - When the numerator stays the same, and the denominator increases, the value of the fraction decreases.
  - When the denominator stays the same, and the numerator increases, the value of the fraction increases
- a. Be able to order fractions from greatest to least

Posted from <http://ell.syr.edu/fow/fraction/index.html>

- Equivalent fractions  
Simplifying fractions using factors, prime factorization  
All prime factors that multiply to make denom, find common ones  
 $\frac{4}{6} = 0.6667$   $\frac{2}{3}$
- Comparing fractions  
When denominators are the same, it's simple  
Otherwise, find least common denominator then compare numerators
- Operations in fractions  
Adding and subtracting with common denominators  
 $\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$   
Multiplying and dividing fractions  
Multiplying: mult. Numerators, denominators, simplify  
Show why it works  
Dividing:  
Reciprocal of second fraction

In the game, the player will explore real world applications of concepts involving fractions, percents, and decimals as they try to run a successful small bakery. The concepts will be incorporated into pricing, adjusting recipes, and serving portions.

Posted from <file:///C:/Users/billy/Documents/11%2011%20New%20Simple%20Math%20Powerpoint.ppt>

Bargain Bakery?

Working at a bakery. You start in the morning at half past 9. If there are 60 minutes in an hour, when is this?  
9:30  
You get to the bakery. Your recipe for cookies says to set the oven at 1/3 of it's full heat. If the recipe says to cook your recipe at 300 degrees, what temperature should you set the oven to?  
 $300 \times \frac{1}{3} = 100$

You bake 36 cookies in batches of 12. How many cookies to you cook in each batch?  
 $\frac{12}{36} = 0.3333$   $\frac{1}{3}$

You baked 24 cookies but 3 fell off the tray when you were taking the tray out of the oven. What fraction of the cookies did you lose?  
 $\frac{3}{24} \rightarrow \frac{1}{8}$

You charge \$2 for each of your cookies. The bakery next door charges \$3, but they are having a half price sale. How much do their cookies cost now?  
 $3 \times \frac{1}{2} = 1.5$   
Now each cookie is 1.5

Oh no! People have started going to the bakery next door because they have a lower price! What percent do you need to reduce your price to match your competitor?  
Your cookie costs \$2.00 and theirs costs 1.50  
The difference is .50, 1/2 of a dollar, 50 cents.  
What is  $0.50 / 2.00 = 0.25$  25%  
If you had 4 groups out of 50 cents, then you would have 2 dollars. Taking away one of those four groups would leave you with 3 groups of 50 cents -- 1.50, matching the competitors price.

Yay! Now that you lowered your prices, more customers have started coming to your bakery. Twice as many in fact (you make such good cookies!). This means that you need to double your recipe.

If your recipe calls for:

<http://allrecipes.com/Recipe/simple-spinach-lasagna/Detail.aspx>

Apple Crisp - ram

Contributed By: [rscottab](#)  
Betsy Crocker Cookbook

Classic simple, tasty apple crisp.

Ingredients

- 4 Medium tart cooking apples (Gravenstein, Rome, Granny Smith), sliced (4 cups)
- 3/4 cup Packed brown sugar
- 1/2 cup All-purpose flour\*
- 1/2 cup Quick-cooking or old-fashioned oats
- 1/3 cup Butter or stick margarine, softened\*\*
- 3/4 tsp Ground cinnamon
- 3/4 tsp Ground nutmeg
- Cream or ice cream, if desired

Preparation

1. HEAT oven to 375°. GREASE bottom and sides of square pan, 8 x 8 x 2 inches., with shortening.
2. SPREAD apples in pan. MIX remaining ingredients except cream; SPRINKLE over apples.
3. BAKE about 30 minutes or until topping is golden brown and apples are tender when pierced with fork. SERVE warm with cream.

a pizza, just not  $\frac{1}{2}$  or a pizza. (no one needs to explain how you know.

2. Imagine that you shared your bag of mini doughnuts with your sister. You ate  $\frac{1}{2}$  of the bag while your sister ate  $\frac{2}{3}$  of the bag. Who ate more? Explain how you know.

1. Marty ate some candy. He ate 1-half of a whole Hershey bar before lunch. He ate 1-fourth of a whole Hershey bar after lunch. About how much of one candy bar did he eat? With your fraction circles, find out the exact amount of a Hershey bar that Marty ate. Draw pictures to show what you did with the circles. Estimate first!!!













Estimate: \_\_\_\_\_

2. Terri ate 1-half of a small pizza and 5-twelfths of another small pizza. About how much of a whole pizza did she eat? With your fraction circles, find out the exact amount. Draw pictures to show what you did with the circles. Estimate first!!!

Estimate: \_\_\_\_\_

Dry Ingredient Equivalents		
1 tablespoon	3 teaspoons	15 ml
1/8 cup	2 tablespoons	30 ml
1/4 cup	4 tablespoons	50 ml
1/3 cup	5-1/3 tablespoons	75 ml
1/2 cup	8 tablespoons	125 ml
2/3 cup	10-2/3 tablespoons	150 ml
3/4 cup	12 tablespoons	175 ml
1 cup	16 tablespoons	250 ml
Wet Ingredient Equivalents		
1 cup	8 fluid ounces	1/2 pint
2 cups	16 fluid ounces	1 pint
4 cups	32 fluid ounces	2 pints
8 cups	64 fluid ounces	4 pints

Fill in the gaps...

		$\frac{1}{2}$	50%	0.5
				
				
				
				
				

Maybe like this, but include greater than ones