



MULTIPLYING RECIPES

Gingerbread French Toast

This recipe makes 3 or 4 servings.

Ingredients:

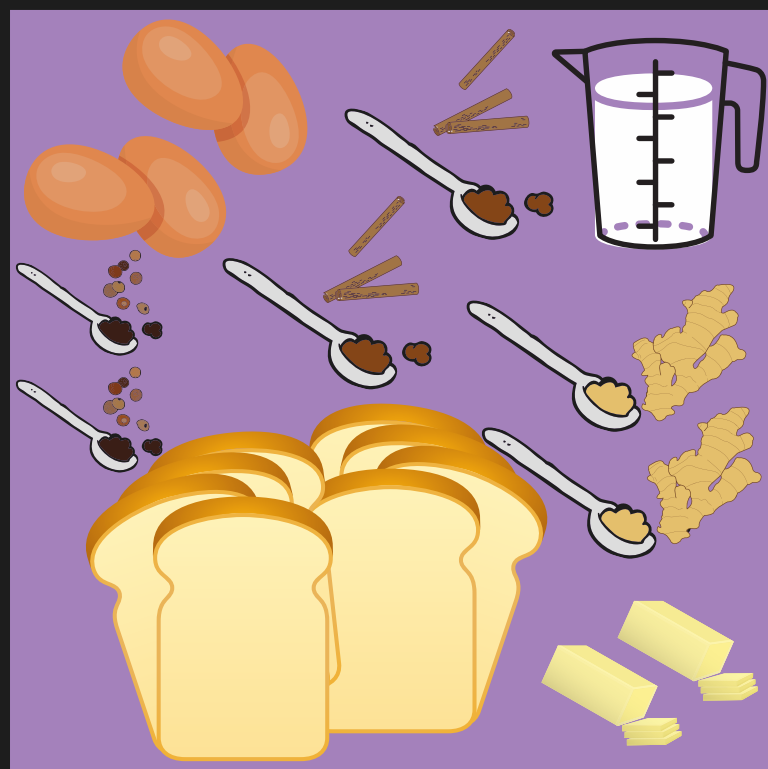
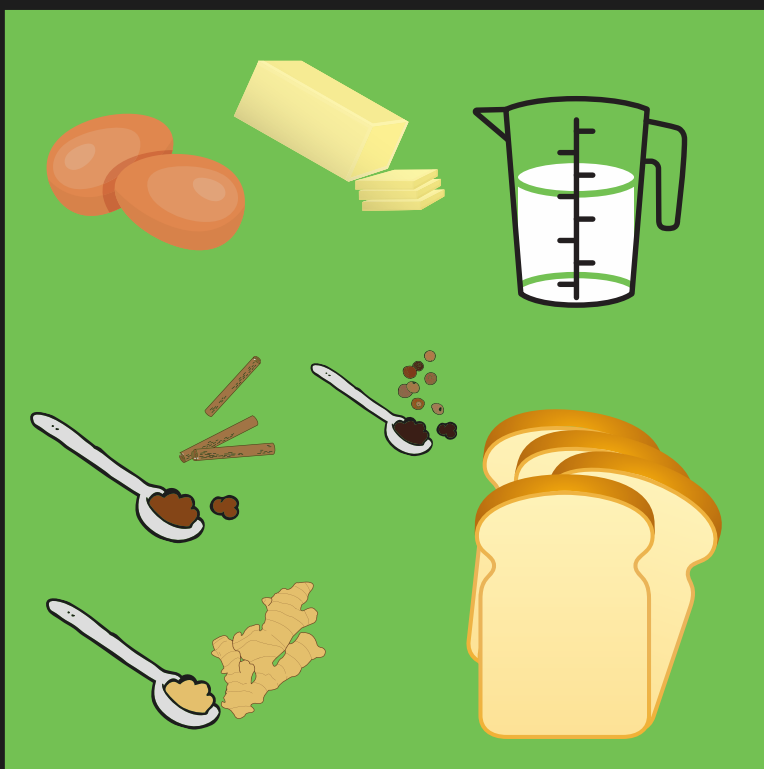
- 2 eggs
- 1/2 cup milk
- 1 teaspoon cinnamon
- 1 teaspoon powdered ginger
- 1/4 teaspoon allspice
- 3 or 4 slices Italian or sourdough bread or challah
- A slice or two of butter for the pan

Double the Gingerbread French Toast!

If you would like to change the recipe to serve 6-8 people, you have to double it.

Ingredients:

- 4 eggs
- 1 cup milk
- 2 teaspoon cinnamon
- 2 teaspoon powdered ginger
- 1/2 teaspoon allspice
- 6 or 8 slices Italian or sourdough bread or challah
- Add additional butter to the pan, when frying each slice



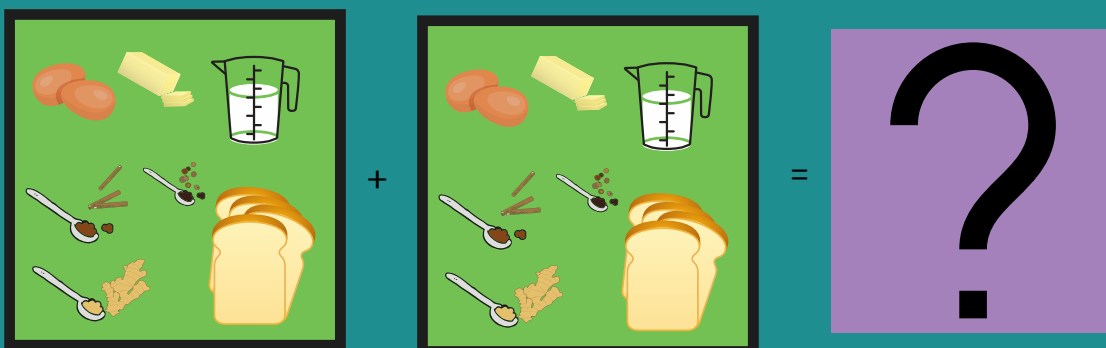
Recipes don't always make as much food as you need. For example the original Gingerbread French Toast recipe only makes 3-4 servings. One serving size is the amount recommended for one person. So, if you have friends or family over and suddenly you have to make 8 servings of Gingerbread French Toast, and you don't want to have to make the recipe twice, you can instead use math to double your recipe.

2 Eggs	X2	=4 Eggs
1/2 cup Milk	X2	=1 cup Milk
1 teaspoon cinnamon	X2	=1 teaspoon cinnamon
1 teaspoon powdered ginger	X2	=1 teaspoon powdered ginger
1/4 teaspoon allspice	X2	=1/2 teaspoon allspice
3-4 slices bread	X2	=6-8 slices bread

Sometimes it can be easier to do the math without the words next to the numbers. Doubling the Gingerbread French Toast looks like this:

$2 \times 2 = 4$
$1/2 \times 2 = 1$
$1 \times 2 = 2$
$1 \times 2 = 2$
$1/4 \times 2 = 1/2$
$4 \times 2 = 6$

Or you can use the visual aids:



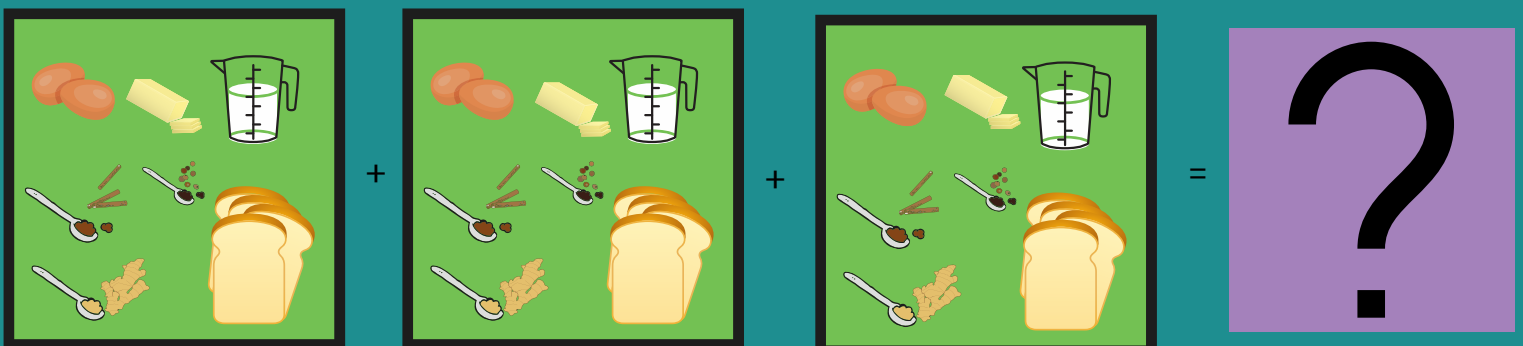
Now that you know how to double a recipe, can you do the math to figure out how to triple the recipe?

2 Eggs	X3	= _ Eggs
1/2 cup Milk	X3	= _ cup Milk
1 teaspoon cinnamon	X3	= _ teaspoon cinnamon
1 teaspoon powdered ginger	X3	=_ teaspoon powdered ginger
1/4 teaspoon allspice	X3	= _ teaspoon allspice
3-4 slices bread	X3	= _ slices bread

You can also use just the math equation:

$$\begin{aligned} 2 \times 3 &= \\ \frac{1}{2} \times 3 &= \\ 1 \times 3 &= \\ 1 \times 3 &= \\ \frac{1}{4} \times 3 &= \\ 4 \times 3 &= \end{aligned}$$

Or you can use the visual aids:



Bonus activity!

We've learned how to multiply a recipe to make more food for more people, but what if you want to make a recipe for fewer people?

In order to reduce a recipe you would want to *divide* the recipe.

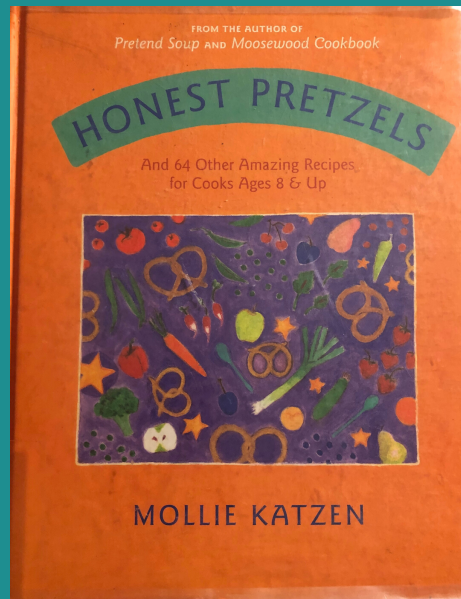
There are some limitations to this, for example, it can get complicated when you are trying to divide 1 egg, which is easier to keep whole.

For the french toast recipe let's try dividing the recipe in half to make 1.5-2 servings instead of 3-4!

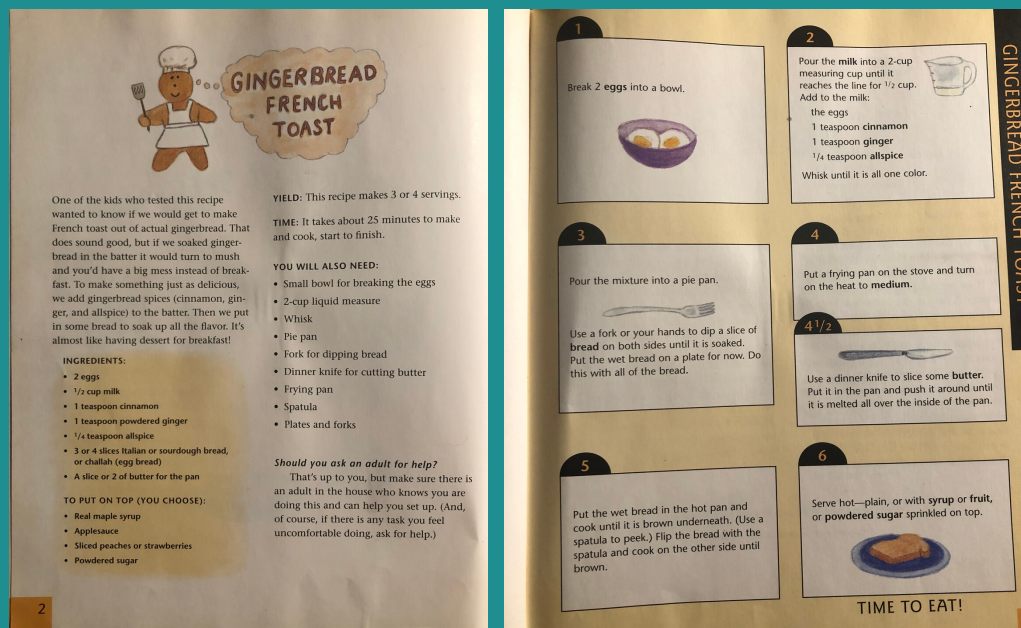
2 Eggs	$\div 1/2$	=2 Eggs
1/2 cup Milk	$\div 1/2$	=1/2 cup Milk
1 teaspoon cinnamon	$\div 1/2$	=1/2 teaspoon cinnamon
1 teaspoon powdered ginger	$\div 1/2$	=1/2 teaspoon powdered ginger
1/4 teaspoon allspice	$\div 1/2$	=1/8 teaspoon allspice
3-4 slices bread	$\div 1/2$	=1.5-2 slices bread

Just the math:

$$\begin{aligned}2 \div 1/2 &= 1 \\1/2 \div 1/2 &= 1/4 \\1 \div 1/2 &= 1/2 \\1 \div 1/2 &= 1/2 \\1/4 \div 1/2 &= 1/8 \\4 \div 1/2 &= 2\end{aligned}$$



An amazing kid-friendly cook book is *Honest Pretzels* by Mollie Katzen. It's where the Gingerbread French Toast recipe for this activity comes from. There are easy step-by-step instructions with visual aids and a list of ingredients and equipment needed for each recipe. It also points out steps where you might need help from an adult. You can find it in the children's section at your local library!



Debrief/Key points:

- Math comes in handy when you are cooking!
- You can use multiplication when you want to change a recipe to make more food.
- You can use division when you want to change a recipe to make less food.