

Brain Maker Baking Math

Banana Bread Challenge Pack

Measure it. Scale it. Explain it. Bake it.

A real-world measurement and recipe math activity

Convert	Scale	Explain
tablespoons to recipe measurements	recipes for groups and leftovers	the math using useful terms

Grades 3-5 | Enrichment | Teacher + Tutor Friendly

Christina Dennis, M.Ed. | 2026

How to Use This Brain Maker Challenge

Real baking gives students a reason to use measurement, fractions, multiplication, division, and explanation.

What Students Practice

- Converting tablespoon amounts into useful recipe measurements.
- Scaling a recipe up for a larger group.
- Thinking about servings, leftovers, and why real-world math sometimes requires rounding up.
- Explaining a solution with clear math language.

Brain Maker Teaching Note

This mini-pack can be used as a tutoring activity, classroom enrichment task, family math activity, or practical extension after a measurement lesson. Students do not need to bake the recipe to complete the math, but baking makes the math more meaningful.

Suggested Order

Step	Page
1	Convert the tablespoon recipe.
2	Read or bake the original banana bread recipe.
3	Scale it up for 20 people.
4	Use the optional explanation page.

Challenge 1: Convert the Ingredients

Convert the tablespoon measurements first. Then use your converted recipe to bake.

Helpful Facts

1 cup = 16 TBS 1 TBS = 3 tsp 1 tsp = 1/3 TBS 1/4 tsp = 1/12 TBS

Ingredient	Amount in TBS	Convert to recipe measurement
All-purpose flour	32 TBS	
Baking soda	1/3 TBS	
Salt	1/12 TBS	
Brown sugar	12 TBS	
Butter	8 TBS	
Large eggs, beaten	2 large eggs	same: 2 large eggs
Mashed overripe bananas	37 1/3 TBS	

Math Goal

Use measurement conversions to turn a tablespoon-only recipe into a real baking recipe.

Banana Bread Recipe

Simple 9x5-inch loaf recipe

Ingredients

- 2 cups all-purpose flour
- 1 teaspoon baking soda
- 1/4 teaspoon salt
- 3/4 cup brown sugar
- 1/2 cup butter, softened
- 2 large eggs, beaten
- 2 1/3 cups mashed very ripe bananas

Directions

1. Preheat oven to 350°F. Lightly grease a 9x5-inch loaf pan.
2. In a large bowl, stir together the flour, baking soda, and salt.
3. In another bowl, mix the brown sugar and butter until smooth.
4. Stir in the beaten eggs and mashed bananas.
5. Add the banana mixture to the flour mixture. Stir only until combined.
6. Pour batter into the prepared pan.
7. Bake about 60 minutes, or until a toothpick comes out clean.
8. Cool in the pan for 10 minutes before removing from the pan.

Kitchen Note

Use very ripe bananas for better flavor. This page is for classroom math practice and family baking. Adults should supervise oven use and kitchen tools.

Challenge 2: Scale It Up

The banana bread recipe makes 8 servings. You need to feed 20 people.

Think About It

Real-life recipe math does not always come out evenly. If two recipes are not enough, you may need to round up so every person gets one serving.

How many full recipes do you need to make?

How many total servings will that make?

Will there be any servings left over?

Explain why making only 2 recipes is not enough.

Use Your Answer to Scale the Recipe

Ingredient	Original Recipe	Scaled Recipe for 20 People with left-overs.
All-purpose flour	2 cups	
Baking soda	1 tsp	
Salt	1/4 tsp	
Brown sugar	3/4 cup	
Butter	1/2 cup	
Large eggs	2 large eggs	
Mashed bananas	2 1/3 cups	

Optional Brain Maker Page

Explain Your Baking Math

Scale It Up

Explain the process you used to find the solution. Use the word list to choose math terms that fit your explanation.

servings	recipe	total	groups	multiply
divide	remainder	round up	left over	enough / not enough

My Explanation

Show Your Math

Challenge 3: Scale It Down

What if you only want a smaller loaf or fewer servings?

Half Recipe Challenge

The original recipe makes 8 servings. A half recipe would make about 4 servings. Find half of each ingredient amount.

Ingredient	Original Recipe	Half Recipe
All-purpose flour	2 cups	
Baking soda	1 tsp	
Salt	1/4 tsp	
Brown sugar	3/4 cup	
Butter	1/2 cup	
Large eggs	2 large eggs	
Mashed bananas	2 1/3 cups	

Brain Maker Tip

Some half-recipe measurements are not as neat as the original recipe. It is okay to write an equivalent amount, such as tablespoons instead of cups, when that makes the measurement easier to use.

Check the Math

Use this page to review your choices before baking or turning in the challenge.

- ☐ Did I convert cups, tablespoons, and teaspoons carefully?
- ☐ Did I label my measurements?
- ☐ Did I decide whether I needed to round up?
- ☐ Did I explain why my answer makes sense?
- ☐ Did I check that every person gets one serving in the group challenge?

One Thing I Noticed About Recipe Math

One Place I Had to Think Carefully

Answer Key

Challenge 1: Convert the Ingredients

Ingredient	Challenge Amount	Recipe Measurement
All-purpose flour	32 TBS	2 cups
Baking soda	1/3 TBS	1 tsp
Salt	1/12 TBS	1/4 tsp
Brown sugar	12 TBS	3/4 cup
Butter	8 TBS	1/2 cup
Large eggs, beaten	2 large eggs	same: 2 large eggs
Mashed overripe bananas	37 1/3 TBS	2 1/3 cups

Check the Math

- 1 cup = 16 TBS, so 2 cups = 32 TBS.
- 1 TBS = 3 tsp, so 1/3 TBS = 1 tsp and 1/12 TBS = 1/4 tsp.
- 3/4 cup = 12 TBS because $16 \times 3/4 = 12$.
- 1/2 cup = 8 TBS because $16 \div 2 = 8$.
- 2 1/3 cups = 37 1/3 TBS because 2 cups = 32 TBS and 1/3 cup = 5 1/3 TBS.

Teacher Note

Egg volume varies, so this challenge keeps the eggs as “2 large eggs” instead of converting them to tablespoons.

Answer Key

Scale It Up and Scale It Down

Challenge 2: Feeding 20 People

- One recipe makes 8 servings.
- $20 \div 8 = 2$ remainder 4, so 2 recipes only make 16 servings.
- Two recipes are not enough for 20 people.
- Students need to round up to 3 full recipes.
- $3 \times 8 = 24$ servings, so there will be 4 servings left over.

Ingredient	Original Recipe	For 3 Recipes
All-purpose flour	2 cups	6 cups
Baking soda	1 tsp	3 tsp or 1 TBS
Salt	1/4 tsp	3/4 tsp
Brown sugar	3/4 cup	2 1/4 cups
Butter	1/2 cup	1 1/2 cups
Large eggs	2 large eggs	6 large eggs
Mashed bananas	2 1/3 cups	7 cups

Challenge 3: Half Recipe

Ingredient	Original Recipe	Half Recipe
All-purpose flour	2 cups	1 cup
Baking soda	1 tsp	1/2 tsp
Salt	1/4 tsp	1/8 tsp
Brown sugar	3/4 cup	3/8 cup or 6 TBS
Butter	1/2 cup	1/4 cup
Large eggs	2 large eggs	1 large egg
Mashed bananas	2 1/3 cups	1 1/6 cups

Teacher + Tutor Notes

Standards-friendly skill connections

- Measurement conversions: cups, tablespoons, teaspoons, and fractional measurements.
- Operations and algebraic thinking: multiplication, division, equal groups, and remainders.
- Fractions: halves, thirds, fourths, eighths, mixed numbers, and equivalent measurements.
- Mathematical practice: make sense of a real problem, use precision, and explain reasoning.

Ready-to-Use Packet Description

This Brain Maker Baking Math activity helps students practice measurement conversions, recipe scaling, servings, remainders, and math explanation through a real-world banana bread challenge. Students convert a recipe, scale it for a group, explain their thinking, and extend the math by finding a half recipe.

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