



First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	




Cooking and Baking

Welcome to Math Challenge #5. Math plays a crucial role in the cooking and baking process, ensuring precision, efficiency, and consistency. From measuring ingredients accurately to adjusting recipe quantities, math is essential for achieving the desired results. Timing, another critical aspect, involves not just following prescribed cooking durations but also coordinating multiple tasks simultaneously to achieve a harmonious outcome. Furthermore, budgeting and shopping for ingredients need basic arithmetic to manage costs effectively. In essence, cooking and baking are daily activities that naturally integrate mathematical concepts, reinforcing the practical application of math in everyday life.

In this challenge, we solve math problems in cooking and baking. Enjoy the challenge!

Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 7 problems.
Fourth Grade and above: solve at least 12 problems.

Answer

1. Samyak and Hayden decorated 2 cookies each. Boris decorated 3 cookies. How many cookies did they decorate altogether?	
2. Grandma Jean cut a pumpkin pie into 8 equal pieces. If we ate all but 2 slices of pie, how many slices did we eat?	
3. To make a batch of oatmeal cookies, Bernie needs 4 cups of old fashioned oats. How many cups of oats will he need to make 3 batches of oatmeal cookies?	
<div style="display: flex; align-items: flex-start;">  <div style="flex-grow: 1;"> 4. Tanisha is going to make Cranberry Oatmeal Cookies. She got a recipe from Chef Lee. The recipe calls for 14 ingredients. She has all of the ingredients except for cinnamon, brown sugar, coconut flakes, vanilla extract and dried cranberries. How many of the ingredients does she already have? </div> </div>	
5. Takai baked three dozen cookies. He gave a dozen to Mr. Song and gave 15 cookies to Mrs. Porter. He then kept the rest because 3 of his friends are coming over later to play and he plans to share cookies with them.	
<div style="margin-left: 20px;"> a. How many cookies did he give away? b. How many cookies does he have left to share with his friends? </div>	<div style="margin-left: 20px;"> a. b. </div>


6. A medium pizza is typically divided into 8 slices. Diana bought 4 medium pizzas for a gathering with her 12 closest friends. If each person, including Diana, ate 2 slices of pizza, how many slices are left?

7.





The prices shown above are per piece.
If you can buy at most one of each baked goods, what is the largest number of baked goods you can buy with a \$20 bill?

8. Mr. Tedjo baked 24 dinner rolls for a family dinner. The number of adults at dinner was exactly the same as the number of children. Each adult ate 2 rolls, and each child ate 1 roll. If there were 3 dinner rolls left, how many adults were there at dinner?





9. Sanika baked 3 batches of chocolate chip cookies. She used one-third of a bag of chocolate chips to make all 3 batches of cookies. How much of the original bag did she use for each batch?



10.  Shin made pumpkin pies for a Pie Sale event at school. She used $\frac{1}{3}$ cup of flour to make each pumpkin pie. If she made 15 pumpkin pies, how many cups of flour did she use in total?

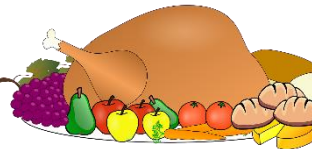
11. A pastry chef bought 5 kilograms of carrots to make carrot cakes. Each large carrot cake needs 350 grams of carrots. A small size carrot cake needs 240 grams of carrots. If the chef makes 8 large carrot cakes, how many whole small carrot cakes can he make without having to buy more carrots? *1 kilogram = 1000 grams.*



<p>12. A chocolate cake calls for $1\frac{1}{4}$ cup of sugar for the cake, $\frac{2}{3}$ cup of sugar for the filling, and $1\frac{1}{2}$ cups of sugar for the icing and decoration.</p> <p>a. How many cups of sugar are needed to make this cake? Express your answer as a mixed number, in simplest form.</p> <p>b. Convert your answer to tablespoons. Express your answer as a mixed number, in simplest form. <i>1 cup = 16 TBSP</i></p>		<p>a.</p> <p>b.</p>
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<p>13. You are preparing a three-course meal and want to serve all dishes simultaneously at 7:00 PM. The preparation and cooking times for each course are as follows:</p> <ul style="list-style-type: none"> • Appetizer: 30 minutes of prep, followed by 15 minutes of cooking. • Main Course: 45 minutes of prep, followed by 1 hour of cooking. • Dessert: 20 minutes of prep, followed by 30 minutes of baking. <p>Determine the starting times for each course to ensure that all dishes are ready at the same time, at 7:00 PM.</p>	<p><i>Appetizer:</i></p> <p><i>Main Course:</i></p> <p><i>Dessert:</i></p>
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<p>14. You are planning to bake a large batch of cookies for a school event. You need to minimize the cost while maintaining the quality of ingredients. You have the following options for one of the ingredients (chocolate chips):</p> <p>Brand A: \$3.50 per 12-ounce bag Brand B: \$4.75 per 16-ounce bag Brand C: \$5.00 per 20-ounce bag</p> <p>You need 96 ounces of chocolate chips. Which brand gives you the most cost-effective way to purchase the chocolate chips that you need?</p>	
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<p>15. Mr. Fong's family will be having a turkey dinner. Mr. Fong bought a 14-pound (lb.) turkey.</p> <p>a. If the cost of the turkey is \$1.48 per pound, how much did he pay for the 14 lb. turkey?</p> <p>b. Mr. Fong is calculating the time and temperature to bake the turkey. He was told to cook 15 minutes per pound at 350 degrees Fahrenheit. How long would it take to bake the turkey? Express your answer in hours and minutes (for example, 1 hour 10 minutes).</p>		<p>a.</p> <p>b.</p>
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<p>16. Joko wanted to bake three pies for Thanksgiving dinner. One pie crust calls for 2.25 cups of flour. The filling calls for 4 tablespoons of flour. How many cups of flour will she need to bake these 3 pies? Express your answer as a mixed number, in simplest form.</p> <p><i>1 cup = 16 tablespoons</i></p>	
<p>17. Julie wants to make the perfect fudgy brownies, but she doesn't have the right measuring tools. All she has are tablespoons. Help Julie convert the first five ingredients into tablespoons.</p> <p><i>1 cup = 16 tablespoons; 1 tablespoon = 3 teaspoons</i></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>1 $\frac{1}{4}$ cup granulated sugar $\frac{3}{4}$ cup + 2 tablespoons cocoa powder $\frac{1}{2}$ cup all-purpose flour 1 teaspoon vanilla extract $\frac{3}{4}$ cups chocolate chips 10 tablespoons unsalted butter 2 large cold eggs A pinch of fine sea salt</p> </div>	<p>___ TBS sugar ___ TBS cocoa powder ___ TBS flour ___ TBS vanilla ___ TBS chocolate chips</p>
<p>18. The math club is planning a cookie sale. All profits from the sale will go to the local charity. They baked 10 dozen cookies. It cost \$5.55 to make a dozen cookies. They plan to sell each cookie after school at \$2 apiece. If they sell 90% of the cookies, how much money will they donate to the local charity?</p>	

Solution is available on November 22, 2024
www.mathinaction.org