



Title

Exact proportion for moussaka

Author

Olivera Vinaji, mathematics teacher

Table of activities

School subject	<i>Mathematics</i>
Topic	<i>Application of proportion</i>
Age	<i>13 years</i>
Required time fo the activity	<i>45 minutes</i>
Required materials	<i>Pens, paper, recepits, the Internet</i>
Cultural concept	<i>Adapting moussaka recipes</i>

Licence

Attribution CC BY. *This license lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licenses offered. Recommended for maximum dissemination and use of licensed materials.*

Teaching concept

In this activity, students get the opportunity to apply their knowledge of mathematical calculations in real-life situations and connect it with the importance of healthy eating habits.

Cultural concept

Moussaka is a traditional dish that originates from the Balkans and the Middle East, typically made with eggplant or potato as the main ingredient.

Mathematical concept

Direct proportionality is a mathematical concept that states that two quantities are directly proportional if their ratio remains constant as one quantity changes. This means that if one quantity increases, the other quantity will also increase by the same factor. In other words, there is a linear relationship between the two quantities. This concept can be applied to various real-life situations, such as calculating the amount of ingredients needed to prepare a recipe, where the amount of each ingredient needed is directly proportional to the number of servings.

Aim of activity

The aim of this activity is to help students apply their mathematical knowledge in a real-world context. By studying the nutritional aspects of traditional dishes such as moussaka, students can learn how to apply proportional reasoning to practical situations. This allows them to connect mathematical concepts to real-life scenarios and gain a better understanding of how math can be used to solve problems related to health and nutrition.

Activities

This activity has two parts. In the first part, students search the internet for recipes that are typical for a particular region. In the second part, they adjust the recipe to serve a specific number of people. For this activity, the students will find recipes for moussaka, a traditional dish made from eggplant or potato that is popular in the Balkans and the Middle East. One example is the Syrian Moussaka, which is made with eggplant, beef or mutton filling, tomato sauce, and a topping of eggs, flour, and yogurt, and baked. This recipe is typically for four to six people. To prepare moussaka for a larger or smaller group, students use direct proportions to calculate the required ingredients. By applying their mathematical knowledge, students can even calculate the amount of ingredients needed to make moussaka for 35 or more people. To solve this problem, students need to know how to search the internet, apply basic calculus and proportions, and work together as a team.