Interpretation of the Mathematical Geometry of the Roti Canai Structure in North Sumatra

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Article Info

ABSTRACT

This research was aimed at finding out the role of mathematical geometry in the process of making delicious Roti Canai. This research uses a literature review method or what is usually called library research which uses library materials such as books, magazines, documents, and journal articles. The results of this research show that there is a role of mathematical geometry in making Roti Canai, which includes a circular shape (π), structure, weight, and temperature measurement. From all the involvement of geometry in the process of making Roti Canai, delicious Roti Canai is created. So, it is concluded that the role of geometry is very important in the process of making Roti Canai.

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INTRODUCTION

Roti canai is a type of flatbread with Indian influence, which is widely found in Indonesia. According to expert Baharom (2002), Roti Canai is thinning bread dough so that it is flat and thin which is round and crunchy on the outside, but rather wet and thick on the inside originating from India. This bread can be found in restaurants in Aceh and West Sumatra in Indonesia. In India, such bread is called roti prata. The shape of Roti Canai is thin bread because, in the manufacturing process, the method is rotated to thin, then folded and panned seared using oil, and can also be poured thinly on the pan. Usually in Indonesia, this bread is served with various types of curry soup,

Roti is a word in Urdu, Malay, and Indonesian for bread in English. Meanwhile, canai can refer to the name of Chennai City in India. Channa cuisine in India, or the word canai which means rolled dough in Malay. In Indonesia, Roti Canai is also called Roti Cane, Roti Konde, or Roti Mariyam, and is often served with goat curry and tarik tea. Roti Canai entered Indonesia through the migration of Indian Muslims to the Aceh Sultanate in the northern part of Sumatra around the 17th century, then spread throughout the Dutch East Indies now Indonesia in the early 9th century.

Roti Canai is easily found in Sumatra, including in Aceh, North Sumatra, and also in West Sumatra. Roti Canai has been recognized as Sumatran Malay cuisine, Acehnese cuisine, and Minangkabau cuisine. Therefore, many restaurants in Malay, Aceh, and Minangkabau serve Roti Canai with various types of curry flavors. In Indonesia, it is applied by tribal groups other than Indian breeds. This cuisine originating from India has been well integrated into Acehnese regional cuisine which feels like their ownership is intact.

Roti canai in Indonesia is used as one example of market snacks in traditional Indonesian markets, namely 'Roti Konde' which by the surrounding community is better known as 'roti maryam because it has a shape resembling konde. Maryam bread is a type of flatbread with Indian influence, which is widely found in Indonesia and Malaysia.

Based on the explanation above, the shape of the roti canai is flat and round. Therefore, the purpose of this article is to connect the concept of mathematical geometry with the layer structure in roti canai.

RESEARCH METHODOLOGY

This research was designed by the author using the literature review method commonly called literature research, this research is research that collects data using literature materials such as books, magazines, documents, etc. (Pringgar, Rizaldy Fatha; Sujatmiko, 2020). Then, according to Sugiyono (Dewi, 2020), a literature review is a theoretical review or scientific study related to norms and cultural values by the social development studied. Researchers collect data from articles or online journals, where researchers use Google Scholar. Researchers obtained data through the keywords "Roti Canai" and "Geometry Concepts in Roti Canai".

This research covers the territory of Indonesia, especially in North Sumatra because it is by the theme of this study, namely the relationship between geometry and local wisdom of North Sumatra. The articles used are articles published in the last 5 years.

RESULTS AND DISCUSSION

Geometry is the understanding of the concepts of various geometric shapes, flat wakes, and spatial builds. Knowing the names and characteristics of various geometric shapes and looking for shapes that are the same as each of these shapes in the real world of Ismiyani (Fuadiyah N, 2013). Furthermore, according to Dwi J (2010: 266) Geometry is the study of space relations. Geometry builds on concepts that begin by identifying shapes separating images such as triangles, squares, and circles. It can be concluded that Geometry is an approach to solving a problem in recognizing the shapes of objects, comparing, differentiating, and distinguishing similarities and differences in the shape of an object. Geometry is the systematic thinking, structure, and hierarchy of higher concepts based on what has been preconceived, so in learning geometry one must be able to recreate all the concepts that exist in his mind, introducing a wide variety of shapes. Furthermore, Freudenthal (Afgani, 2011) said that geometry is a space where children are, live and move. In that space children must learn to know, to explore. fight to conquer, plan and manage life (to live), breath, and do better (move better in it) (Afgani, 2011). (in Triharso, 2013:50).

Furthermore, according to the expert, Moeharti (1986: 12) said that geometry is a mathematical branch of points, lines, planes, and objects of space and their properties. Its size and relationship to each other.

In the explanation of the geometry concept above, there is a flat shape, one of which is a circle shape. Then, through the shape of the circle, we can form the concept of the circle into a real thing through the thoughts that exist in a person. This real thing can be seen from the application of the circle shape in roti canai. Food originating from India which is now a dish that is often found in North Sumatra and roti canai has become the local wisdom of North Sumatra. Below is a picture of Roti Canai

Roti Canai Pictures

From the picture above, it can be seen that the shape of Roti Canai is a circle which is one of the flat shapes in geometry. In geometry, a circle has a concept (22/7 or 3.14). Geometry also plays a role in the process of making Roti Canai. In the first manufacturing stage prepare all tools and ingredients, the necessary ingredients include 250 grams of wheat flour, 3 tablespoons of liquid margarine, 100 ml of liquid milk, 1 egg yolk, 1/2 teaspoon of salt, 1/2 teaspoon of sugar. Combine all the ingredients used so that it becomes a dough

that is ready to be formed into rounds. Then the dough is divided into several smaller parts. Then the dough that has been divided is smeared with cooking oil so that the dough does not stick to the pan. Then flatten each dough by paying attention to the appropriate structure and layers, slice the dough, and round it again so that it looks like the texture of the Roti Canai when flattened and widened so that all layers of Roti Canai are evenly distributed. The next stage, namely the roasting process carried out using a pan.π

Picture of the Roti Canai Roasting Process

Then in the process of roasting Roti Canai, geometry also plays a role where proper temperature measurements are needed, which is around $21°$ C $-27°$C so that Roti Canai cooks perfectly and has a delicious taste. The shape of this bread is very flat because it is made by turning it thin, then folding it and panning seared with oil, or it can also be by spreading the dough as thin as possible on the pan. In Indonesia, roti canai is served with chicken, goat, or lamb curry.

CONCLUSION

Geometry is the understanding of the concepts of various geometric shapes, flat wakes, and spatial builds. Geometry is the systematic thinking, structure, and hierarchy of higher concepts based on what has been preconceived. In learning geometry one must be able to recreate all the concepts that exist in his mind, introducing various shapes into real forms. This can be realized in the food that we can find in North Sumatra, namely Roti Canai. Geometry plays a role in making Roti Canai, it can be seen from the shape, namely circles, that the ingredients used must match the dose (weight), and the right temperature measurement in the ripening process of Roti Canai. Thus it is very instrumental in the process of making the right Roti Canai. From the discussion above, it is concluded that the role of geometry is very important in the process of making Roti Canai.

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