



Unit Description

Title	LOKUMS from Türkiye
Age of students/grade	7th grade / 13 years
Length of the unit	1 lesson (50 minutes)
Mathematical topic	Types of triangles and their properties
Prerequisite knowledge	<ul style="list-style-type: none">• Students know the properties of acute-angled, right-angled, and obtuse-angled triangles and can name them.• Students know the Pythagorean theorem.
Materials needed	<ul style="list-style-type: none">• Slip of paper or notebook to solve the problems if there is not enough space on the specification sheet.• Writing utensils• Calculator
Objectives	<ul style="list-style-type: none">• Students discover the Pythagorean theorem.• Students will know the types of triangles and their properties.• Students will be able to prove the Pythagorean theorem.• Students will independently explore and derive the Pythagorean Theorem.
Notes on work with migrant students	<ul style="list-style-type: none">• Learning is like lokums sweet, colourful, different and high quality

Lesson plan:

1. Task:

Material:

The students are given three DinA4 sheets divided into squares with different colors (e.g. blue, green, yellow, ...). (This sheet can be found as a pdf file in the appendix).

Task:

- The task of the students is to cut out squares and put the corners of each square together.
- In doing so, they should create different triangles.
- The student's goal is to fill in the following table with their observations:

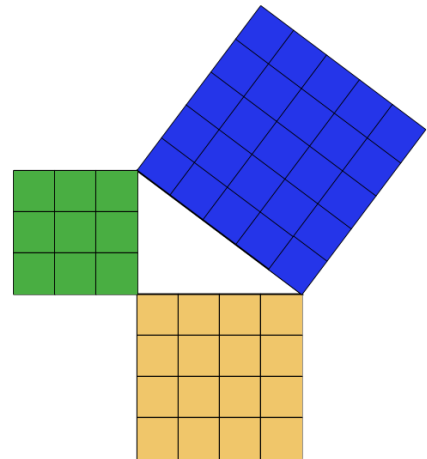
Triangle type	Size of 1st square	Size of 2nd square	Size of the 3rd square

Afterwards, the research results are collected on the board:

1. question to the class before collecting the results: "Which triangle was the most difficult to lay?"
Because of the accuracy, it is the right triangle."
2. then the students results are recorded in the first table.
3. the teacher can point out that, based on the numbers, he/she can already tell who worked the most accurately and found the right triangle.

2. Task:

Typical treat in Türkiye that all students love and know is lokum in different flavours, colours, etc. As an example of cubes that fill different sized packages depending on the size in different numbers, and within a package in different varieties, sizes, flavours and colours.



Proof: Pythagorean Theorem

Hans and Indira are visiting a good friend in Türkiye whose father works in a lokum store. They want to spend a day here sniffing around the store:

There are 3 packs, each cube-shaped. Since the first row of the pack is transparent, you can see how many pieces are in the first row.

Hans has bought a pack of Lokums: in the 1st row (see picture) he sees 5 Lokums.



Task:

Indira claims that she has more Lokums than Hans because she has 2 packs. Is this true?

3. Task:

Here below you can see other options (candy): Kremini or sugar cubes.



Find a similar cube-shaped candy from your own country and use it to justify whether Indra's claim is true or false.

Then take a picture of it and email it to your math teacher.

$$a^2 + b^2 = c^2$$

