



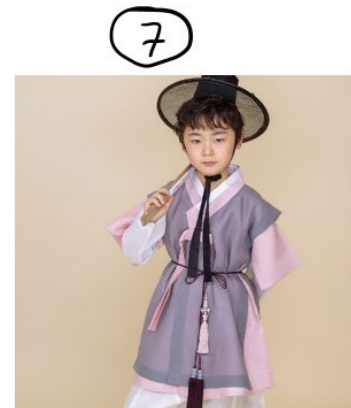
Unit Description

Title	Clothing cultures in different areas of the world
Age of students/grade	8th grade / 14 years
Length of the unit	1 lesson (50 minutes)
Mathematical topic	Functions
Prerequisite knowledge	<ul style="list-style-type: none">• Students know what a function is.• Students know the terms domain of definition, range of values, function value and understand, i.e., can explain what they mean.
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
Objectives	<ul style="list-style-type: none">• Students will be able to define and recognize functional dependencies.• Students will be able to graph a function using a table of values and an arrow diagram.• Students can understand a relationship between two quantities as a function.
Notes on work with migrant students	<ul style="list-style-type: none">• They can use costumes to discuss the sense and nonsense of differences.

Lesson plan:

Every landscape or region in the world has its own costume, which is different from the costumes in other places. It tells us something about the people who wear it, whether it is cold or warm there, mountainous or flat, rich or poor, about history and tradition. People and their costumes have a special relationship, a function to each other. You can see from them what connects people and what is different.

1. Ayşe (Turkey): Bindalli
2. Sakura (Japan): Kimono
3. Anjali (India): Sari
4. Gerald (Bavaria): Lederhosen
5. Amri (Egypt): Galabia
6. Camila (Mexico): China-Poblana
7. Minho (Korea): Hanbok

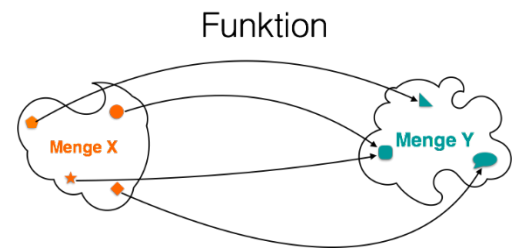


1. Task:

What is a function?

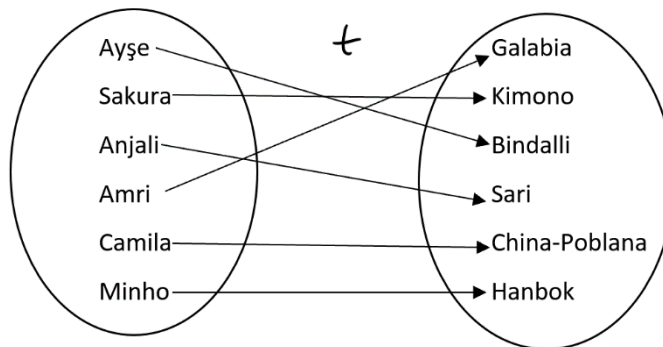
A function is a unique assignment, which

- to each element x of a set X (also called definition range D)
- an element y of a set Y (also called value range W).



Task:

There is a cultural day at school. The students are dressed traditionally. Costume is defined as a function.



Each name is assigned its livery in the arrow diagram.

- Justify that this assignment defines a tracht function t .
- Give the definition set and the value set of t .
- Give the values for x and y such that $t(\text{Sakura}) = y$ and $t(x) = \text{Hanbok}$
- Justify why $\text{David} \notin D_t$.

2. Task:

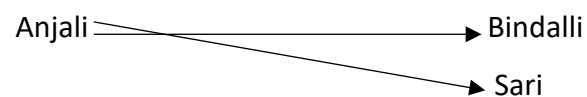
In the table you can see the names of the students. Fill in the table with their countries of origin.

students names	Countries
Minho	
Ayşe	
Amri	
Gerald	
Anjali	
Camila	
Sakura	

a) Draw an arrow diagram in which each name is assigned its country of origin.

b) Write all assignments in functional notation, e.g., like this: $f(\text{Minho}) = \text{Korea}$

c) Decide if this assignment is also a function. Give reasons for your decision!



3. Task:

Ask four students from your class who have a different first language about their traditional dress.

a) Draw an arrow diagram.

b) Find two tasks of your own for this arrow diagram and solve the tasks.