

# Europeana Learning Scenario

## Title

Queen Christina and Rene Descartes

## Author(s)

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## Abstract

Students explored the life of Christina the Queen of Sweden during the lessons of mathematics. The topic was connected to mathematics through Queen's teacher Rene Descartes who was a famous mathematician. During that lesson, students learned about Cartesian Product which in Serbian is called *Descartes' Product*. The mathematical definition of the Cartesian product is a product of two sets A and B, denoted  $A \times B$ , is the set of all ordered pairs (a, b) where a is in A and b is in B.

## Keywords

Cartesian product, Mathematical definition, Queen Christina, Rene Descartes, definition

## Table of summary

<i>Table of summary</i>	
Subject	Mathematical lessons
Topic	Cartesian product
Age of students	15
Preparation time	2h
Teaching time	45min
Online teaching material	-
Offline teaching material	PowerPoint presentation, textbooks
Europeana resources used	<a href="#">Resource 1</a>

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### Integration into the curriculum

The lesson is directly connected to the curriculum requirements and topic related to the Cartesian product.

### Aim of the lesson

The aim of the lesson is to motivate students to learn mathematics, including an important topic called “Cartesian product”.

### Outcome of the lesson

Students will:

- Learn about the life of a famous woman in the past – Christina the Queen of Sweden.
- Learn about the life of famous mathematician Rene Descartes.
- Gain knowledge in mathematical content required by the curriculum.

### Trends

Project-based learning and creativity.

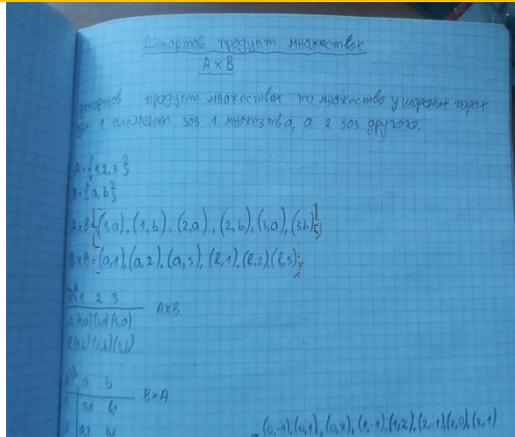
### 21<sup>st</sup> century skills

With this LS, students develop their critical thinking skills by connecting facts related to the life of Queen of Sweden, her education, and the role of Descartes in his life. Also, students reflect the importance of mathematics and science in the life of individuals.

### Activities

Name of activity	Procedure	Time
<b>Introduction</b>	The teacher explains the steps and activities. The activities include learning about the Cartesian product and solving mathematical tasks. Then, students explore the history of mathematics and life of famous mathematician Rene Decartes, also his connection with the Queen of Sweden.	5 min
<b>Main activity</b>	Students learn about the Cartesian product. They solve mathematical tasks related to the topic. Below in the picture are the notes related to the Cartesian product.	20 min

Name of activity	Procedure	Time
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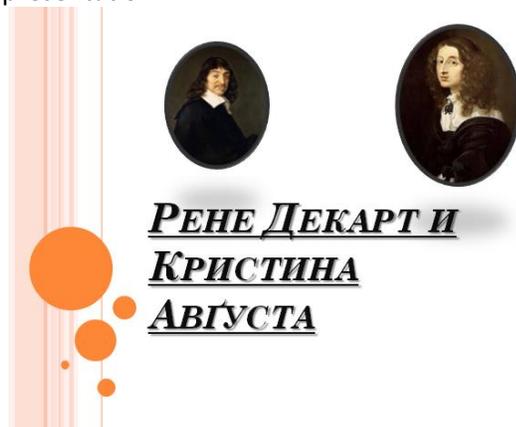


15 min

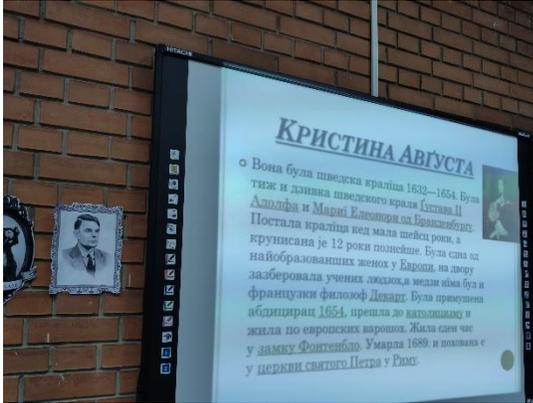
Resources:

- <https://www.youtube.com/watch?v=IUP114x2qM>
- <https://www.youtube.com/watch?v=ufjEv-5nmcA>

After understanding what Cartesian product is, students shortly discuss the history of mathematics. Then, they work in pairs to research the life of Descartes and his connection to the Queen of Sweden. They use Europeana resources. After they finish, they present their findings. Below are some excerpts from students' presentation:



Students present their findings about the life of Christina Queen of Sweden.

Name of activity	Procedure	Time
 <p><i>Students present their findings about the life of Christina Queen of Sweden.</i></p>  <p><i>Students present their findings about the life of Christina Queen of Sweden.</i></p>		
<p><b>Conclusion</b></p>	<p>Students were motivated to research and to connect mathematics with history. Also, they found the of the Queen of Sweden very interesting.</p>	<p>5 min</p>

**Assessment**

Students have to research about Rene Descartes using Europeana resources and prepare presentations.

\*\*\*\*\* AFTER IMPLEMENTATION \*\*\*\*\*

**Student feedback**

Students liked this kind of activities and story motivated them to learn about the Cartesian product, which is an important topic when studying mathematics.

### Teacher's remarks

Europeana web portal provided interesting resources that motivated students to learn about an important mathematical concept. Real-life situations that can be connected to mathematics are always valuable resources for learning mathematics.

### About the Europeana DSI-4 project

[Europeana](#) is Europe's digital platform for cultural heritage, providing free online access to over 53 million digitised items drawn from Europe's museums, archives, libraries and galleries. The Europeana DSI-4 project continues the work of the previous three Europeana Digital Service Infrastructures (DSIs). It is the fourth iteration with a proven record of accomplishment in creating access, interoperability, visibility and use of European cultural heritage in the five target markets outlined: European Citizens, Education, Research, Creative Industries and Cultural Heritage Institutions.

[European Schoolnet](#) (EUN) is the network of 34 European Ministries of Education, based in Brussels. As a not-for-profit organisation, EUN aims to bring innovation in teaching and learning to its key stakeholders: Ministries of Education, schools, teachers, researchers, and industry partners. European Schoolnet's task in the Europeana DSI-4 project is to continue and expand the Europeana Education Community.

### Annex