

# History of mathematics

## Group work : Oral presentations

DNL 1<sup>ère</sup>

2013-14

No knowledge beyond "Seconde" is required

### ■ Directions

Work in groups of **two** students, preferably from the same class as it will be easier to meet to finish the project. One of the topics below will be assigned to your group. You will have to **present** the topic to the class. Make sure you split the oral presentation (so each member of your group gets a chance to talk). Presentations should be 2 to 5 minutes long. (No written report this time.)

■ Oral presentation : On the day we deal with your topic in class as we move through time in chronological order.

• The following topics are common to all presentations, make sure you address them:

1. Which period of time will you be talking about?
2. Which part of the world will you be talking about? (locate it on a map)
3. What are the mathematical topics at stake? (keep it simple)
4. If need be, what was the context? You may describe briefly the life of the person you are talking about.
5. What was already known in the area of maths you will focus on at that time?
6. What was the contribution of this person or this group to mathematics?
7. How is it an improvement over what was known before?
8. What did we inherit from this person or this group that we still use today (if any)?
9. What did you learn when preparing this presentation that you find interesting?

Depending on the topic of your presentation you may of course add to this list of suggested topics.

- You may use the projector to show some visual document (*remember that pdf always works...*).
- Anecdotes and striking facts help your audience focus and remember what you are saying. Include some if you can!
- Make sure the audience understands : Speak slowly, clearly, explain and pay attention to signs that people are lost!

Before the presentation takes place

- Decide who will present what.
- Remember that the whole group is responsible for the content of what any team member says (*see Grading Rubric*): Make sure every one in the group understands the details and can explain them!
- If you have any doubts about how to pronounce some words, type them into <http://dictionary.reference.com/> and then click on the microphone icon to listen to them.
- You may rehearse your presentation in front of other group members so they can help you improve it. If you have a mp3 player which can record sounds or, even better, a phone which can record videos, you may use it.

■ How your work will be assessed : See the rubric on page 3, "Teacher's worksheet"

# History of maths Presentation topics

Presentation 1: **Pre-greek mathematics: Egypt, Mesopotamia, China, India**

Presentation 2: **Thales of Miletus**

Presentation 3: **Pythagoras**

Presentation 4: **Euclid of Alexandria**

Presentation 5: **Eratosthenes**

Presentation 6: **Mathematics in medieval Islam : (622 to ~1600)**

Presentation 7: **Equations with Pacioli, Cardan, Tartaglia, Ferrari**

Presentation 8: **Calculus with Leibnitz and Newton**

Presentation 9: **Evariste Galois**

Presentation 10: **Mathematics, computers and WWJ : Alan Turing**

Presentation 11: **A famous alive mathematician : Cédric Villani**

Archimedes?

# Grading rubric: History of maths presentations

	Sdt	Sdt	Sdt		
<b>HISTORY OF MATHS</b>					
<b>How your work will be marked:</b>					
<i>In case the presentations are prepared <u>in class</u></i>					
				Team	
<b>In class group work:</b>					
Used English only while working on the project in class.				X	2
Worked cooperatively with other team members: listened to other team members, offered ideas. Made constructive rather than negative comments on the work of other team members.				X	1
Worked quietly so as not to disturb the other teams (please whisper!)				X	1
<i>Subtotal</i>					<b>4</b>
<b>Oral presentation (each member of the team should talk in turn):</b>					
The context was explained clearly.	X	X	X		1
The main point were addressed and facts were accurate.	X	X	X		4
The presentation was clear and easy to follow.	X	X	X		3
Eye contact. Tone. Voice loud and clear.					2
The English is correct. The reporter was talking rather than reading his/her notes.				X	5
<i>Subtotal</i>					<b>15</b>
<b>Class sharing</b>					
Listened carefully to the others teams' presentations.				X	1
<i>Bonus:</i> Offered good comments, asked relevant questions during the others teams' presentations.				X	1
<i>Subtotal</i>					<b>1</b>
<b>MARK (UK) / GRADE (US)</b>				<b>X</b>	<b>20</b>

<b>HISTORY OF MATHS</b>	Sdt	Sdt	Sdt		
<b>How your work will be marked:</b> <i>In case the presentations are prepared <u>outside of class</u>.</i>					
				Team	
<b>Oral presentation (each member of the team should talk in turn):</b>					
The context was explained clearly.	X	X	X		1
The main point were addressed and facts were accurate.	X	X	X		5
The presentation was clear and easy to follow.	X	X	X		3
Eye contact. Tone. Voice loud and clear.					3
The English is correct. The reporter was talking rather than reading his/her notes.				X	6
<b>Subtotal</b>					<b>18</b>
<b>Class sharing</b>					
Listened carefully to the others teams' presentations.				X	2
<i>Bonus:</i> Offered good comments, asked relevant questions during the others teams' presentations.				X	1
<b>Subtotal</b>					<b>2</b>
<b>MARK (UK) / GRADE (US)</b>				<b>X</b>	<b>20</b>

P1: **Pre-greek mathematics:**  
**Egypt, Mesopotamia, China ,**  
**India**

P2: **Thales of Miletus**

P3: **Pythagoras**

P4: **Euclid of Alexandria**

P5: **Eratosthenes**

P6: **Mathematics in**  
**medieval Islam : (622 to**  
**~1600)**

P7: **Equations with Pacioli,**  
**Cardan, Tartaglia, Ferrar**

P8: **Calculus with Leibnitz**  
**and Newton**

P9: **Evariste Galois**

P10: **Mathematics,**  
**computers and WWJ : Alan**  
**Turing**

P11: **A famous alive**  
**mathematician : Cédric Vialani**