

# HONORS GEOMETRY



UNIT PROJECT 5  
2017 - 2018

# PROJECT - UNIT #5

## History of Mathematics-Vocabulary

The vocabulary of mathematics developed over many centuries. Some words such as *cone* and *circle* are thousands of years old, while other words such as *fractal* are only about 20 years old. Many common vocabulary words were translated from other languages and interesting backgrounds. The word *rhombus*, for example, is taken from the Greek meaning 'spinning wheel' or 'top'. The reason for such an unusual origin is that the ancient Greeks used a spinning top shaped like a rhombus to foretell the future. Another term, *cevian* (a segment from the vertex of a triangle to the opposite side), is derived from Italian mathematician Giovanni Ceva (1648-1734), who first wrote about such segments.

Your assignment is to produce a poster or PowerPoint which shows the derivation of at least twenty (20) vocabulary words. Drawings or photos must be included to illustrate each word.

The poster should be on a standard-sized poster board and be colorful and eye-catching.

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## ESSAY PROJECT

For this project you will be doing some research about a mathematician chosen from the list below. In order to share your findings with the entire class, you will produce a full-sized poster board or a PowerPoint which highlights the mathematician's life and accomplishments. The poster or PowerPoint shall contain the mathematician's name with dates of birth and death prominently displayed. Include a portrait or photocopy of what the mathematician looked like. Items to be included are achievements in mathematics with a brief explanation of what the mathematician accomplished, such as the Pythagorean Theorem, complete with a diagram and/or formula. Accomplishments outside the field of mathematics such as Einstein's winning the Nobel Prize, should also be used. List at least two references you used for your research, visible on the poster board or-PowerPoint.

Be sure your poster or PowerPoint is easily read and eye-appealing.

The following is a list of mathematicians for the mathematics history project.

1. THALES
2. PYTHAGORAS
3. JOHN NAPIER
4. JOHANN KEPLER
5. LEONHARD EULER
6. ALBERT EINSTEIN
7. RENE DESCARTES
8. BLAISE PASCAL
9. ERATOSTHENES
10. GALILEO GALILEI
11. EMILIE DU CHATELET
12. APPOLONIUS OF PERGA
13. CHARLES BABBAGE
14. GRACE MURRAY HOPPER
15. EUCLID
16. BHASKARA
17. HYPATIA
18. SOPHIE GERMAIN
19. ADA LOVELACE
20. JANOS BOLYAI
21. NICCOLO TARTAGLIA
22. PIERRE DE FERMAT
23. GEORGE BOOLE
24. C.F. GAUSS
25. EVARISTE GALOIS
26. EVANGELISTA TORRICELLI
27. N.I. LOBACHEVSKI
28. ARCHIMEDES
29. G.W. LEIBNITZ
30. OMAR KAYYAM
31. MARY FAIRFAX SOMERVILLE
32. ISAAC NEWTON
33. LEWIS CARROLL
34. FIBONACCI
35. SONYA KOVALEVSKY
36. EMMY NOETHER
37. AL-KHWARIZMI
38. WITCH OF AGNES!
39. GOROLAMO CARDANO
40. SRINIVASA RAMANUJAN
41. FRANCOIS VIETE
42. HERON

The following set of books may serve as resources for any of the mathematicians listed.

Bell, T.E. (1937). *Men in Mathematics*.

Boyer, C. (1968). *The History of Mathematics*.

Burton, D. (1985). *The History of Mathematics: An Introduction*.

Cajori, F. (1928). *A History of Mathematics Notation*.

Dunham, W. (1990). *Journey Through Genius - The Great Theorems of Mathematics*.

Eves, H. (1983). *An Introduction to the History of Mathematics*.

Eves, H. (1969). *In Mathematical Circles*.

Hollingsdale, S. (1989). *Makers of Mathematics*.

Johnson, Art. (1994). *Classic Math: History Topics for the Classroom*.

National Council of Teachers of Mathematics. (1969). *History Topics for the Mathematics Classroom*.

Osen, Lynn M. (1974). *Women in Mathematics*.

Information on mathematicians can be found on the internet. Use a search engine to find information on your choice.