

# Complex Numbers: A History

## References

- *Visual Complex Analysis* by Tristan Needham, 1999. ISBN: 978-0198534464.
- *Mathematics and Its History* by John Stillwell, 2010. ISBN: 978-1441960528.
- *Ecrire les Imaginaires* by Patrick Popescu-Pampu, in Images des Mathématiques. January 12, 2015. <http://images.math.cnrs.fr/Ecrire-les-imaginaires.html?lang=fr>  
Discusses excerpts from:
  - Leonhard Euler's 1777 paper in which he introduces the notation  $i$
  - René Descartes' *Géométrie* in 1637 in which he coins the term "imaginary"
  - Leonhard Euler's *Elements of Algebra* displaying his algebraic **error** in writing  $\sqrt{-2} \sqrt{-3} = \sqrt{6}$  (when it should be  $-\sqrt{6}$ )
  - Carl Friedrich Gauss' *Theoria Residuorum Biquadraticorum. Commentatio Secunda* of 1832 in which he uses the term "complex number" for a number of the form  $a + bi$  where  $i$  denotes the imaginary number  $\sqrt{-1}$  and where  $a$  and  $b$  are real numbers