

A Passion for Mathematics

# Sofia Kovalevskaya

[ 3 January 1850 - 29 January 1891 ]



## Special Scientific Achievements

Sofia Kovalevskaya attained international esteem, by receiving the *Prix Bordin* for her work on the movement of rigid bodies around a fixed point.

Breakthrough in the solution to the rotation problem.

Apart from her outstanding mathematical achievements, Sofia Kovalevskaya also engaged herself politically, as well as achieving success in literary endeavors, writing several novels.

**1850** Sofia Krukowski is born in Moscow on January 3. Her family is counted among the educated aristocracy. Already in early childhood, she exhibits a fascination for mathematics.

**1868** She studies mathematics in St. Petersburg. As passports are only issued to married women, she and Vladimir Kovalevsky start a fictitious marriage, so that she may be able to study abroad.

**1869/1870** The couple Kovalevsky go to study in Heidelberg, only to learn that women are not officially allowed to enroll in classes. One year later, Sofia goes to Berlin to continue her studies. The university refuses to certify women, so she takes private lessons. During these lessons, she overcomes the women rejecting attitudes of her contemporaries with her outstanding mathematical abilities.

**1874** In August, without an oral examination, Sofia Kovalevskaya attains her doctorate *summa cum laude* from Göttingen University.

**1875** Sofia and her husband move back to St. Petersburg. Sofia works very little.

**1878** Their daughter is born.

**1881 - 1883** Sofia Kovalevskaya moves to Berlin with her daughter, in order to resume her work. Two years later, her husband takes his own life.

She is offered a job in Stockholm, and accepts the position as private lecturer.

**1884** Sofia Kovalevskaya obtains a contract as Professor of High Analysis at the University of Stockholm. She becomes an official co-editor and contributor for the technical journal *Acta Mathematica*.



On trips to Paris, Berlin and St. Petersburg, among others, she maintains contact with the important mathematicians of her time, and becomes a highly esteemed colleague. She receives a doctorate degree from the University of Göttingen *in absentia*.

**1886 - 1888** Sofia Kovalevskaya makes a mathematical break-through with the solution of the rotation problem. On December 24, 1888 she receives the *Prix Bordin* from the French Academy of Science.

**1889** She receives a lifetime professorship at the University of Stockholm.

**1890** A long European journey puts strain on her health.

**1891** Sofia Kovalevskaya arrives in Stockholm from her travels ill, and dies of pneumonia on January 29, at the age of 41.

Note:

*Sofia Kovalevskaya modified her name in each country that she lived. For simplicity's sake, one spelling has been used in this text.*