

A great Swiss scholar with a European career

Leonhard Euler, one of Switzerland's outstanding scholars, was born in Basel on 15 April 1707 and went on to have a spectacular European career as a mathematician and scientist. Now Swiss Post is issuing a special stamp to commemorate the 300th anniversary of his birth.

Brought up as the son of a Protestant minister in Riehen, Euler began studying at Basel University at the tender age of 13 where – also aided by private tutoring from the leading mathematician Johann Bernoulli – he made such tremendous progress that in 1727, at not quite twenty, he was offered a position with the newly established Academy of Science in St. Petersburg. In 1741, he moved to the Prussian Academy in Berlin which had been revived by Friedrich II, only to return in 1766 to St. Petersburg where he died on 18 September 1783.

Author of numerous articles and textbooks

Euler was an incredibly prolific researcher and teacher, and not even losing his sight in 1771 stemmed his productive flow. The catalogue of his works comprises over 800 contributions to research, most of which were published in the journals of Europe's major academies. Although he never taught on a regular basis, he wrote numerous standard textbooks on algebra and infinitesimal calculus, mechanics, ballistics and acoustics, astronomy, theory of music and shipbuilding. In his "Lettres à une Princesse d'Allemagne", he summed up the scientific outlook of his period in terms that could be understood by the layperson.

Leonhard Euler is one of the greatest mathematicians of all time. His work reveals a unique combination of broad-based interests and inspired insight, tenacious pursuit of his ideas and a critical understanding of the achievements of his predecessors and contemporaries. Though Euler is mainly known as the leading mathematician of his age, his work also includes ground-breaking treatises on physics, astronomy and engineering. In addition, he conducted an extensive correspondence which provides important insight into the

development of his ideas and into the eighteenth century's entire "république des lettres".

Stamp design based on portrait

The pastel likeness on which the Euler special stamp is based was created in 1753 in Berlin by the talented Swiss portrait artist Emanuel Handmann (1718–1781) and shows the great scientist – Euler had already lost the sight of his right eye – in a remarkably spontaneous mood, dressed in a silk housecoat.



Autumn over the Rhine, looking towards Basel Cathedral and the Middle Bridge. Leonhard Euler started studying at Basel University at the age of 13. Cover page of the journal of the St Petersburg Academy, in which Euler published his findings about the characteristics of geometric shapes (above). Photos: swiss-image.ch, Euler Archive

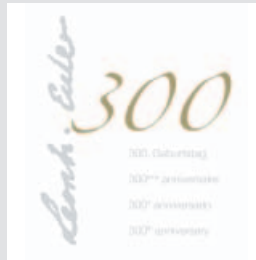


The image of a polyhedral body at which Euler seems to be looking and the equation " $e - k + f = 2$ " (in English, $V[\text{ertices}] - E[\text{dges}] + F[\text{aces}] = 2$) recall one of his best-known discoveries in elementary mathematics, Euler's polyhedral formula (in our example, $V = 12$, $E = 19$ and $F = 9$). In a letter to his friend Christian Goldbach dated 14 November 1750, Euler first refers to the fact that the relationship between the number of edges, vertices and faces of a body – more specifically a convex polyhedron – is always the same, describing it as " $H + S = A + 2$ ". Several years later, he published and proved this relationship in the journal of the St Petersburg Academy (see illustration). This was one of the first general statements about those characteristics of geometrical shapes which are independent of relative proportions so do not vary, even when

deformed. Euler thus founded a new branch of mathematics known as "combinatorial topology".

Like several of Euler's discoveries, the polyhedron formula is one of the best-known mathematical theorems ever. This small indication of what the impressive mind of the man in the portrait produced is intended as a contribution to perpetuating the memory of this great scholar born 300 years ago in Basel.

Martin Mattmüller,
Euler Archive, Basel



First-day cover motif

**Special stamp
300th anniversary
of Leonhard Euler**

Sales
From 6.3.2007,
while stocks last

Post offices
While stocks last

Philatelic salespoints
Until 31.3.2008

Pre-release
From 27.2.2007

Validity
Unlimited from 6.3.2007

Unstamped covers will be available for CHF 0.90 each at all philatelic salespoints and the Stamps & Philately Customer Service from 20.2.2007.

Printing
Offset, 5-colour;
Cartor Security Printing,
La Loupe, France

Sizes
Stamp: 33×28 mm
Sheet: 194×145 mm
(4 rows of 5 stamps)

Paper
White stamp paper,
with optical brightener,
mat gummed, 110 gm²

Perforation
13³/₄:13³/₄

First-day cancellation



Designer
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