c. 287 B.C. Born in Syracuse, Sicily.
c. 269 B.C. Travels to Egypt to study at Alexandria. Invents the Archimedes' Screw, a device used to pump water out of ships.
c. 263 B.C. Returns to Syracuse.
263–216 B.C. Develops most of his major theories, including the fundamental principles of mechanics;and methods for finding the center of gravity, surface area,and volume of geometric figures.Also derives estimate for the value of pi; discovers the principle of buoyancy; and creates a system capable of expressing large numbers.
216 B.C. The King of Syracuse, King Hiero, dies,and is succeeded by his son, Hieronymos.
215 B.C. Hieronymos is assassinated.Civil war erupts in Syracuse.
214–212 B.C. Romans try to invade Syracuse but they are held off by Archimedes' war machines,such as Archimedes' Claw and the catapult.
212 B.C. Romans invade Syracuse. During the invasion,Archimedes is killed by a Roman solider.
A.D. 300 Scribes copy Archimedes' writings onto parchment.
c. A.D. 1000 Archimedes'manuscript containing *The Method ofMechanical Theorems* is copied onto vellum sheets and bound between wooden boards. This text tells how Archimedes developed his mathematical theorems.
c. A.D. 1200 A monk reuses Archimedes'manuscript for a prayer book,creating the Palimpsest. This becomes the only copy of Archimedes'manuscript to survive to the present day.
c. 1400–1800 The Archimedes' Palimpsest is stored in a monastery in the Judaean desert.
Late 1600s Calculus is invented.
Early 1800s The Palimpsest is moved from the monastery to a library in Old Jerusalem.
1846 Constantine Tischendorf, a German scholar, discovers the Archimedes' Palimpsest in Constantinople.
1906 The Danish scholar, Johan Ludwig Heiberg hears about the Palimpsest, travels to Constantinople, and attempts to transcribe the book using nothing but a magnifying glass.
1908–1998 The Palimpsest disappears.
1998 The Archimedes Palimpsest resurfaces in Paris and sells for $2 million at a Christie's of New York auction.
1999–present The Palimpsest is loaned to the Walters Art Gallery in Baltimore, Maryland.Restoration and translation of the manuscript begin.

Who Was Archimedes?

Archimedes of Syracuse was one of the greatest mathematicians in history. He was also a great inventor and scientist. Most of what we know about Archimedes today comes from his writings and those of his contemporaries.

Born in Syracuse, Sicily (then part of Greece), in about 287 B.C., Archimedes traveled to Egypt at the age of 18 to study at the great library of Alexandria. Upon completing his studies, he returned to Syracuse, where he spent the remainder of his life.

Archimedes was obsessed with mathematics. He would become so involved in his work that he would forget to eat. He scribbled notes and figures on any available surface. When outside, he used a stick to draw on the ground; when inside, he used his finger to trace figures in the olive oil on his skin.

Out of this obsession came many of his greatest theories and proofs, such as the means for approximating square roots, the value of pi (the ratio of a circle's circumference to its diameter), and the creation of a way to describe very large numbers. He also devised methods for calculating areas and volumes 2,000 years before the invention of calculus. In addition, Archimedes proved that the volume of a sphere is two-thirds the volume of a circumscribed cylinder. He considered this proof his greatest accomplishment and even requested that a representation of a sphere inside a cylinder be inscribed on his tomb.

Archimedes was well known for his inventions and scientific discoveries. The most famous of these were the Archimedes' Screw (a device for raising water that is still used in crop irrigation and sewage treatment plants today) and Archimedes'principle of buoyancy. Legend has it that he discovered this principle while in the bath, where he noticed that the more of his body he submerged in the water, the greater the amount of water that overflowed the bath. Upon making this discovery, he is said to have run naked through the streets of Syracuse, shouting "Eureka!"(Greek for "I have found it!").

When the Romans invaded Syracuse in 214 B.C., Archimedes invented "engines of war" to defend the city, including cranes to drop rocks, claws to lift ships from the water, and machines to fire wooden missiles. He also devised a system of mirrors that focused the sun's light on enemy ships, setting the ships on fire.

After the Romans successfully captured the city in 212 B.C., Archimedes was killed by a Roman soldier after he allegedly told the soldier, "Don't disturb my circles"—a reference to a series of figures Archimedes had outlined in the sand. As he wished, Archimedes' tombstone is marked with the figure of a sphere enclosed by a cylinder and the 2:3 ratio of their volumes.

Archimedes Resources

Infinite Secrets.
WGBH Boston Video, 2004.
Find out more about Archimedes' life, his work, and the Palimpsest in the NOVA program that airs September 30, 2003. Call (800) 949-8670 or order through the WGBH Shop Web site at:
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