



## ALEXIS CLAIRAULT

**Alexis Claude Clairault** (or **Clairaut**) (May 3, 1713 - May 17, 1765) was a famous French mathematician.

Clairault was born in Paris, France, where his father, Jean-Baptiste Clairault taught mathematics. Jean Bapiste educated his son at home to an unbelievably high standard. Under his father's tuition he made such rapid progress in mathematics that in his thirteenth year he presented before the Académie Française a paper on the properties of four curves, *Quatre problemes sur de nouvelles courbes*, which he had then discovered. When only sixteen he finished a treatise, *Recherches sur les courbes a double courbure*, which, on its publication in 1731, procured his admission into the French Academy of Sciences, although he was below the legal age.

In 1736, together with Pierre Louis Maupertuis, Clairault took part in the expedition to Lapland, which was undertaken for the purpose of estimating a degree of the meridian, and on his return he published his treatise *Théorie de la figure de la terre* (1743). In this work he promulgated the theorem, known as "Clairault's theorem," which connects the gravity at points on the surface of a rotating ellipsoid with the compression and the centrifugal force at the equator.

After his work on *Théorie de la figure de la terre*, Clairault began to work on the three body problem, in particular the problem of the moon's orbit. He obtained an ingenious approximate solution of the problem and in 1750 gained the prize of the St Petersburg Academy for his essay *Théorie de la lune*. Using these calculations, in 1759 Clairault calculated the perihelion of Halley's comet. He also detected singular solutions in differential equations of the first order, and of the second and higher degrees. Clairault died in Paris in 1765.

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