The Giants of Calculus

This is a two-column matching game to test your knowledge of some of the **Giants of Calculus**, indeed, of all **Mathematics**.

Initial Instructions. First, begin by reading the biographical sketches of Newton, Leibniz, Euler, Gauss, Cauchy, and Riemann provided by The MacTutor: History of Mathematics archive. Click on "Biographies Index" and look up each of these great mathematicians, taking notes as you read. (Quiz to follow!)

Done? Or you think you can skip the first step?

Instructions. Click on a person in the *left-hand column* first, then try to match that person with one of the descriptions in the right-hand column. To get 100% you would truly be ...

A Master of the History of Mathematics.

What's that name!

- ❒ Newton
- ❒ Euler
- ❒ Gauss
- ❒ Cauchy
- ❒ Riemann
- ❒ Leibniz

- ❒ Augustin
- ❒ Isaac
- ❒ Georg
- ❒ Leonhard
- ❒ Gottfried
- ❒ Johann

When did they Live?

❒ Newton	❒ 1777–1855
❒ Euler	❒ 1646–1716
❒ Gauss	❒ 1642–1727
❒ Cauchy	❒ 1826–1866
❒ Riemann	❒ 1789–1857
❒ Leibniz	❒ 1707–1783

Where were they born?

- Newton
- Euler
- Gauss
- Cauchy
- Riemann
- Leibniz

- Leipzig, Saxony (now Germany)
- Brunswick, Duchy of Brunswick (now Germany)
- Breselenz, Hanover (now Germany)
- Basel, Switzerland
- Woolsthorpe, Lincolnshire, England
- Paris, France

What did they do?

- ❒ Newton
- ❒ Euler
- ❒ Gauss
- ❒ Cauchy
- ❒ Riemann
- ❒ Leibniz

Note: These descriptions do not adequately represent the voluminous & monumental works of these individuals.

- ❒ His notation for the derivative and the integral is used even to this day.
- ❒ Given credit for first using the functional notation $f(x)$.
- ❒ He developed the Calculus while his University was closed for the plague.
- ❒ Gave a rigorous definition of the definite integral—an integral that now bears his name.
- ❒ He first formulated a precise definition of the limit and continuity of a function.
- ❒ He created the "bell-shaped curve" & first used the method of least squares.

Who said/wrote this?

- ❒ Newton
- ❒ Euler
- ❒ Gauss
- ❒ Cauchy
- ❒ Riemann
- ❒ Leibniz

- ❒ God does arithmetic. [FUMQS]
- ❒ His epitaph: Who, by vigor of mind almost divine, the motions and figures of the planets, the paths of comets, and the tides of the seas first demonstrated. [FUMQS]
- ❒ In symbols one observes an advantage in discovery which is greatest when they express the exact nature of a thing briefly and, as it were, picture it; then indeed the labor of thought is wonderfully diminished. [Simmons]
- ❒ Men pass away, but their deeds abide. [His last words (?)] [Eves2]
- ❒ Now I will have less distraction. [upon losing the use of his right eye] [Eves1]
- ❒ The recognition of the fact that infinite series fall into two classes [according to whether the limit is independent of the ordering of the terms or not] constitutes a turning-point in the conceptualization of the infinite in mathematics. [Remmert]

Whose faces are these?

- Newton
- Euler
- Gauss
- Cauchy
- Riemann
- Leibniz

References

[Eves1] H. Eves, In Mathematical Circles, Boston: Prindle, Weber and Schmidt, 1969.

[Eves2] H. Eves Mathematical Circles Revisted, Boston: Prindle, Weber and Schmidt, 1971.

[FUMQS] Furman University Mathematical Quotations Server: http://math.furman.edu/~mwoodard/ascquotg.html

[Remmert] Reinhold Remmert, Theory of Complex Functions.

[Simmons] G. Simmons, Calculus Gems, New York: McGraw Hill Inc., 1992.