
Solutions to the April 2002 Final Exam: Tan Line Lofts Curve, Ouch!

Mullah McCoy, Armsborg the Swede, and Johnny H. Waco

As noted in the inverted comment at the bottom of the page in the April 2002 Final Exam, “The title, authors’ names and everything in italics on this final exam are anagrams.” The good news is that none of these is as long or as difficult to decode as the fourteen-word one beginning with *Fluxions* at the top of the page, which is actually an anagram of the above sentence! We received assistance from the *ten men vista rearranger* (The Internet Anagram Server) at www.wordsmith.org/anagram/.

Inspecting the photos it is not hard to pick out Leibnitz (the last image in the first row) and Newton (the middle one in the second row), providing a clue to the underlying theme of the entire page. The whole thing was concocted by *Mullah McCoy* (Colm Mulcahy), using custom ordered images supplied by *men mixer got pie graph* (image morphing expert) *Armsborg the Swede* (Thomas W. Sederberg), who *reuses time/cache concept* (teaches computer science) at BYU. *Johnny H. Waco* (John H. Con-

way), who *attaches Thames mice* (teaches mathematics) at Princeton, calculated 3rd October, 1644, as the midpoint of the dates of birth of Leibnitz and Newton, taking calendrical irregularities of the period into consideration (see “Calendrical Conundrums,” by John H. Conway & Fred Kochman, in *Puzzlers’ Tribute: A Feast for the Mind*, edited by David Wolfe and Tom Rodgers).

The ten images are stills taken from an automated morphing from a portrait of
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Gottfried von Leibnitz to a portrait of Isaac Newton. Tom Sederberg generated the morphing, based on ideas found in “A work minimization approach to image morphing,” (in *The Visual Computer*, coauthored with Peisheng Gao). This points to the answer to question one: on average it is **The Inventor of Calculus** (of which our title, *Tan Line Lofts Curve—Ouch!*, is an anagram) who is depicted here.

For the second question, note that the images can be assigned a natural ordering from One (pure Leibnitz) to Ten (pure Newton), according to their position in the morphing sequence. This suggests the order given by the captions: *Fritz (not vie) Bin Log Det*; *Big Fool (Tender Nitwit)*; *I, One Inbred Twit*,

Golf; *Ignoble Edwin Foist*; *Niel (Din Befits) Gow*; *Indecent Fob Wigs*; *Ben C. Ogden-Swift*; *Stoic Dean N. Web*; *Snow Cabin Ted*; *A Secant I Own*.

The third question asks the reader to explain (*not unify*) *ten chaps* (the funny captions). The details are on the website, but the basic idea is a linguistic morph—in the opposite direction—from *A Secant I Own*, an anagram of Isaac Newton, to *Fritz (not vie) Bin Log Det*, a curious one of Gottfried von Leibnitz (considering his investigations into binary numbers, logarithms and determinants).

The fourth question is easy: with reference to the numerical image ordering mentioned above, the order used to display *Tom, then hotel chef* (the men of the cloth) was Eight, Five, Four, Nine, One,

Seven, Six, Ten, Three and Two, which is alphabetical. All but one of the *sly animal rags* (silly anagrams) will have been identified by the end of this note, thus answering the fifth question. The last question (with its remaining anagram) we leave as an exercise!

Of the people who emailed solutions to *Agenda Unsharpener* (Deanna Haunsperger), congratulations and *Zoomin’ Thrash (Math Horizons)* t-shirts go to *Garbled Test Arranger* and *Another Ruby Bearer* (Albert Gerard Stanger and Robert Aubrey Hearn, to their respective friends).

See www.spelman.edu/~colm/maahorizons2002.html for the original final exam, as well as a more detailed version of the solution. ■