

1046-01-1437 **George E. Smith*** (george.smith@tufts.edu), Department of Philosophy, Tufts University,
Medford, MA 02155. *The Mathematics in Newton's Principia Mathematica.*

Did Newton employ the calculus in developing his *Principia*? This frequently asked question is unfortunate not merely because it has no simple "yes-no" answer, but even more so because it draws attention away from the extraordinary range of mathematical techniques that he did employ in that book. The talk will first survey the range of techniques he did employ, in the process explaining why the question whether he employed the calculus has no "yes-no" answer. It will then consider a couple of the many problems peculiar to the physics of the *Principia* that forced Newton to devise novel mathematical techniques that reach far beyond any of those people usually have in mind when they ask whether he did or did not employ the calculus in his physics. (Received September 15, 2008)