

# Calculating area and volumes

- Gottfried Leibniz (1646-1719) and Isaac Newton (1643-1727)
  - Independently gave a foundation of calculus with infinitesimals.
  - We still use Leibniz' notation today.
  - Newton used physical intuition of moving particles, fluctuations and fluxes. *De Methodis Serierum et Fluxionum* was written in 1671 but Newton failed to get it published and it did not appear in print 1736.
  - Leibniz used infinitely close variables  $dx$ ,  $dy$ . In 1684 Leibniz published details of his differential calculus in *Nova Methodus pro Maximis et Minimis, itemque Tangentibus...* in *Acta Eruditorum*.
  - There was a big controversy over priority, which Leibniz, who actually had published first, lost.