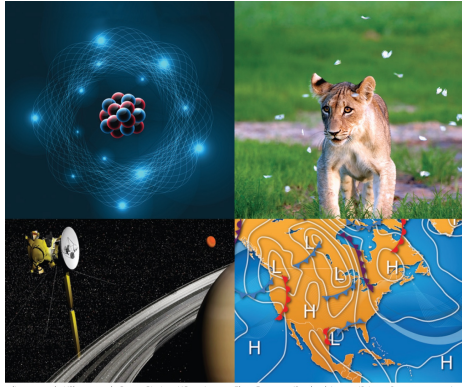


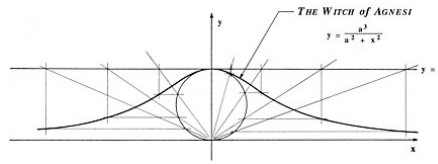
History _____



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— 1600's —

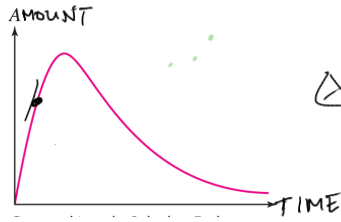


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Maria Gaetana Agnesi (1718–1799), an Italian mathematician and theologian, is credited with writing one of the first books about calculus, *Istituzioni analitiche ad uso della gioventù italiana*. It was self-published and was written as a textbook for her brothers, who she was tutoring.

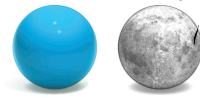
What is Calculus?

STUDY OF SLOPES



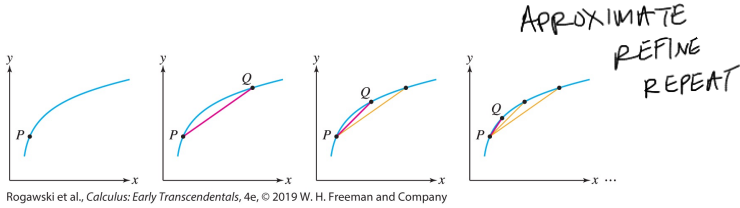
Fundamental theorem

STUDY OF ACCUMULATION

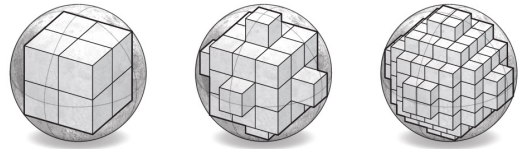


Rogawski et al., *Calculus: Early Transcendentals*, 4e, © 2019 W. H. Freeman and Company

FIGURE 3 For a ball of uniform density, mass is the product of density and volume. For a nonuniform ball, a limiting process needs to be used to determine the mass.



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