

Definite integrals

After completing this section, students should be able to do the following.

- Use integral notation for both antiderivatives and definite integrals.
- Compute definite integrals using geometry.
- Compute definite integrals using the properties of integrals.
- Justify the properties of definite integrals using algebra or geometry.
- Understand how Riemann sums are used to find exact area.
- Define net area.
- Approximate net area.
- Split the area under a curve into several pieces to aid with calculations.
- Use symmetry to calculate definite integrals.
- Explain geometrically why symmetry of a function simplifies calculation of some definite integrals.