

# Calculus Chapter 4

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## Definite Integrals

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Video

Video

***Section 4.2 in Stewart's Calculus.***

## **Preclass Learning Objectives:**

- **Definite integrals calculate the area under a function over an interval.**
- **Riemann Sums.**
- **Properties of definite integrals.**

## **Classroom Slides PDF**

## **Fundamental Theorem of Calculus**

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# Video

# Video

***Section 4.3 in Stewart's Calculus.***

**Classroom Slides  
PDF**

# Indefinite Integrals

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***Section 4.4 in  
Stewart's  
Calculus.***

## Preclass Learning Objectives:

- **An indefinite integral of a function is its general antiderivative.**
- **The definite integral of a rate of change**

**is the net  
change.**

**Classroom Slides  
PDF**

**Integration with  
Substitution**

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***Section 4.5 in  
Stewart's  
Calculus.***



# Video

## Preclass Learning Objectives:

- Substitution is the rule for integration which corresponds to the chain rule for differentiation.
- Introduction to integrating with substitution.

**Classroom Slides  
PDF**

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