

Introduction

Math 140 - Calculus I

Catalin Zara

UMass Boston

September 8, 2009

Back by popular demand

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For a limited time only

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For a limited time only

In a location near you

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A mid-morning special

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UMass Boston
Department of Mathematics

presents

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Math 140: Calculus I

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Math 140: Calculus I

Based on a true story

*Any resemblance with reality has been thoroughly investigated and
proven to be correct.*

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Rated: 130-B or C-26

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as in: **Math 130 with B or better** or

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Math 140: Calculus I

Based on a true story

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Rated: 130-B or C-26

as in: **Math 130 with B or better** or
Placement Test C with 26 or higher

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Directed by

Based on
(Single Variable) Calculus
6th Edition
by James Stewart

Screenplay

UMass Online - Blackboard
URochester - WeBWork
Wolfram - Mathematica

Technical Support

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Alcindor, Alexandra Tasha

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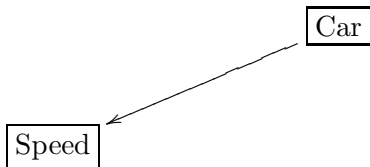
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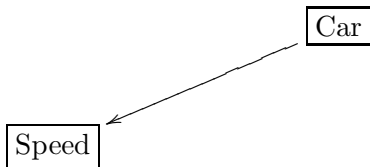
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Poudyal, Rasendra
Ryan, Richard J

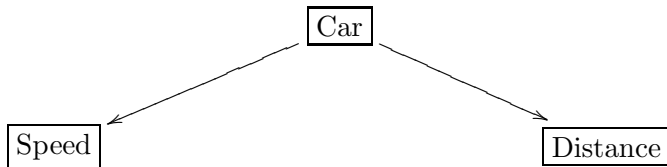
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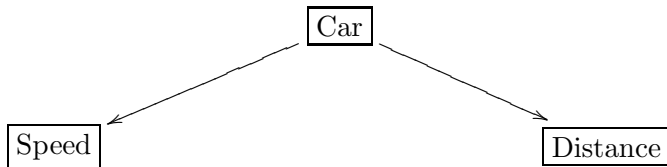




Speed = **Rate of change** of distance with respect to time

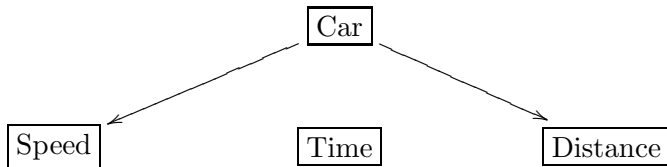
$$v = \frac{\Delta D}{\Delta t}$$

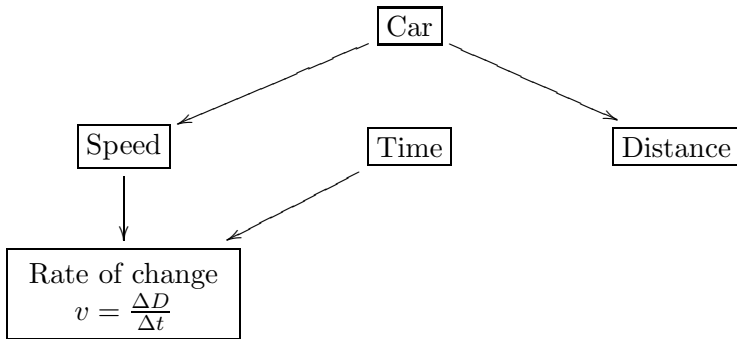




Distance = **Accumulation** of distance traveled over short periods

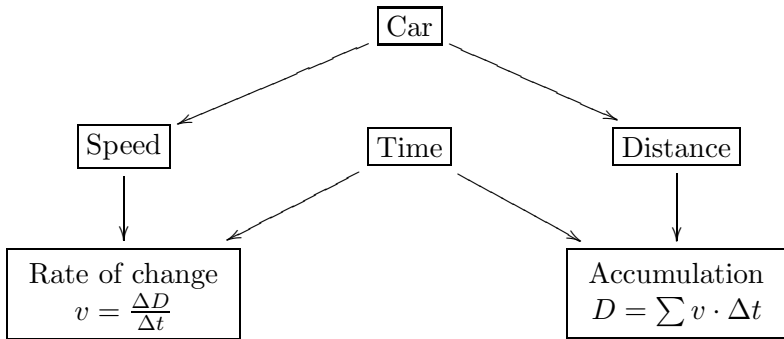
$$D = \sum \Delta D = \sum v \cdot \Delta t$$





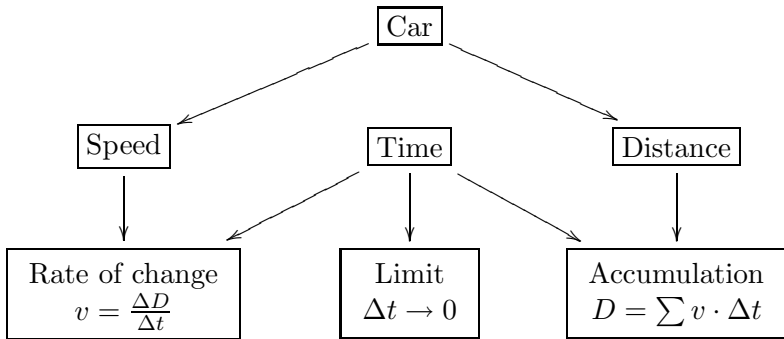
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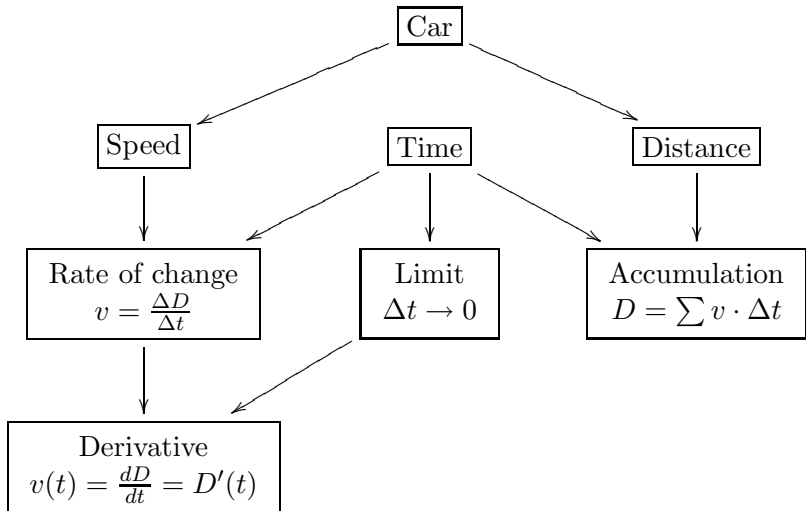
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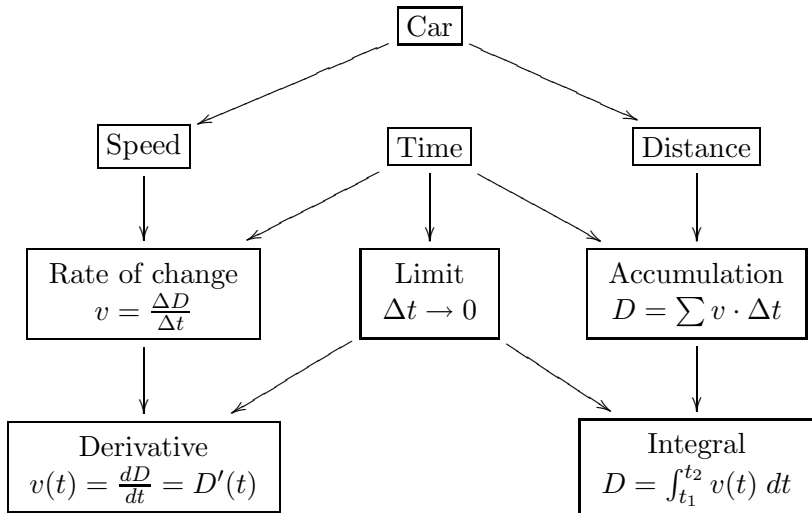


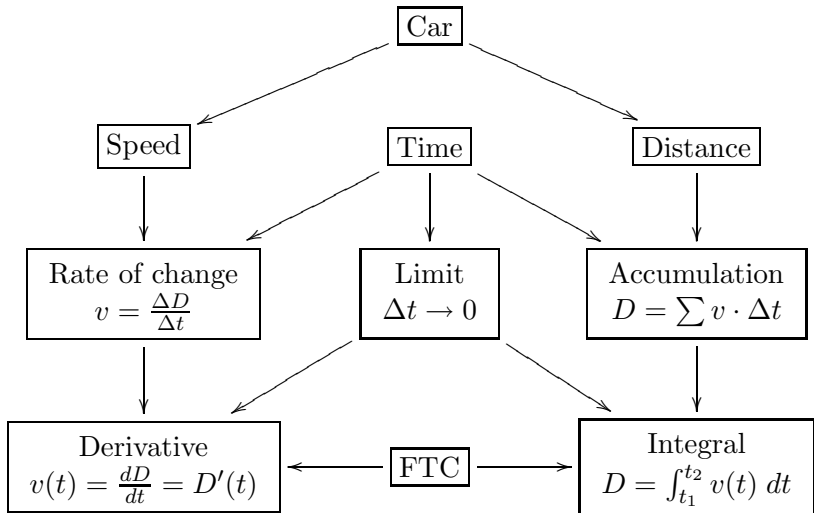
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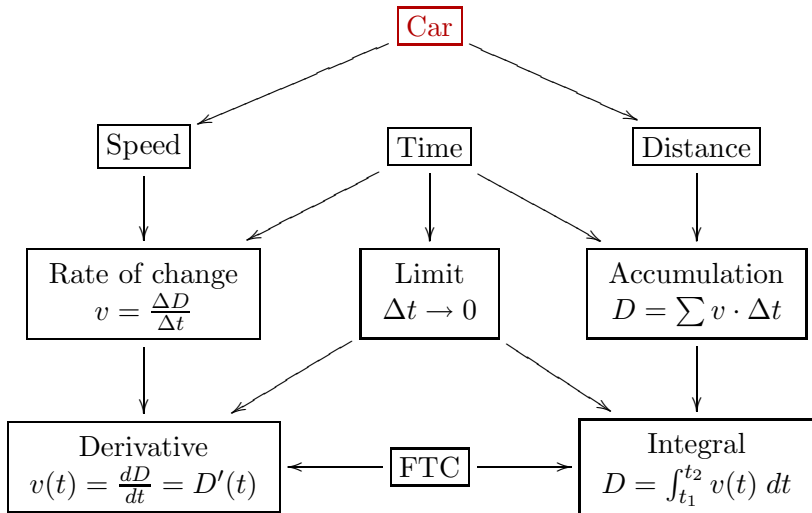
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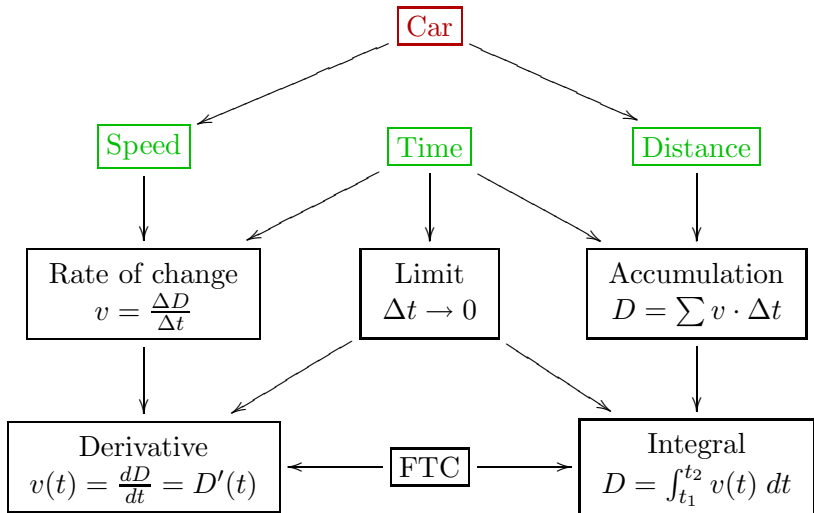


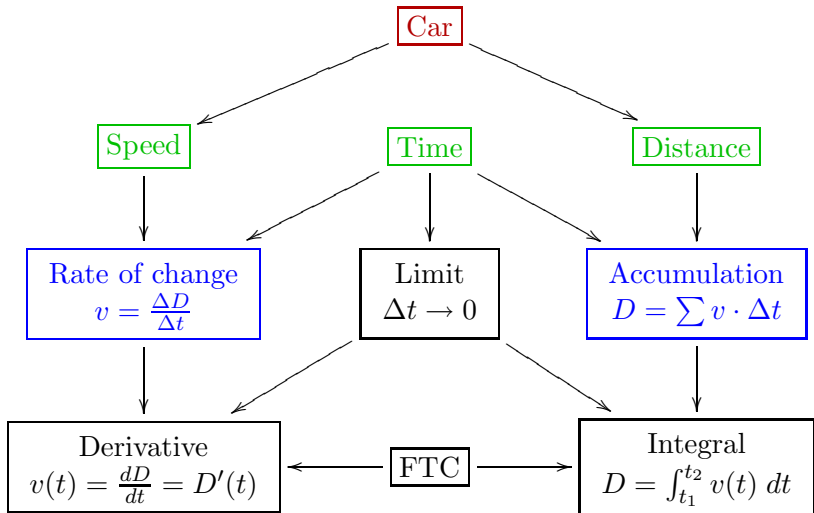


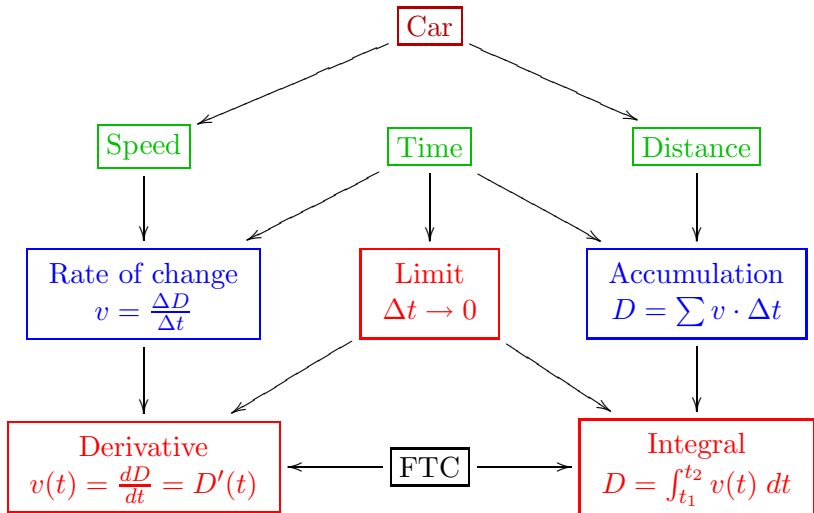












Goals

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- Understand the fundamental concepts of calculus

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- Demonstrate ability to use calculus to solve problems

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 - ▶ Recognize concepts and techniques
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 - ▶ Interpret and communicate the results

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 - ▶ Analyze data
 - ▶ Reason deductively
 - ▶ Think abstractly
 - ▶ Think analytically
 - ▶ Think critically
 - ▶ Solve problems

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- Appreciate the beauty and power of mathematics
- Have fun!

Expectations

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- Motivated students

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- Strong background

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Complete the Survey on *Blackboard!*

Your Rights

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- If you cannot afford a private tutor, one will be appointed to you free of charge if you wish.

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- Office hours
 - ▶ Thu 11:50am - 12:20pm, 2:00pm - 2:50pm
 - ▶ Tu 2:00pm - 2:50pm