

# Welcome to Day One

MATH 115 Section T1  
Instructor: Vlad Yaskin  
Winter 2012

ENHANCED  
**WebAssign**

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EDUCATION

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# What we will cover

- ▶ Textbook Tax Credit– Why Not?
- ▶ What you need for the course
- ▶ How to log on to Enhanced WebAssign
- ▶ How to navigate your Youbook (e–book)

# Textbook Tax Credit

Did you know.....

- ▶ Did you know that you can claim...
  - \$65 for each month you qualify for the full-time education amount?
  - or...
  - \$20 for each month you qualify for the part-time education amount?
  
- ▶ You can claim the textbook amount (right on your tax return!) if you are eligible to claim the education amount (and can support, with documentation, your enrolment at a post-secondary institution).

# Logging in to Enhanced WebAssign

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## Enhanced WebAssign

- Allows you to complete required online homework assignments.
- Provides you with immediate feedback.
- Helps you stay on track with the course.
- Includes rich, tutorial content to aid in concept mastery.
- Provides access to an AWESOME interactive digital version of your textbook (or relevant textbook passages).
- Will help you to succeed in this course.

## So, How Do I Log In?

- ▶ Please go to the login page at:  
<http://webassign.net/login.html>

### Welcome to WebAssign!

Username

Use the username, institution, and password provided by your instructor or account representative.

Institution [\(what's this?\)](#)

Password [\(Reset Password\)](#)

LOG IN →

[\(Trouble Logging In?\)](#)



Students: If your instructor gave you a Class Key, add yourself to that class here.

I HAVE A CLASS KEY →

## Enter Your Class Key

### ▶ Your Class Key (see next slide for your key):

Enter the Class Key that you received from your instructor. You will only need to complete this once. After you have created your account, you can log in on the main page.

#### Class Key

*Class Keys generally start with an institution code, followed by two sets of four digits.*

Submit

Your instructor has decided to allow students to self-enroll into this WebAssign course.

▶ Your Class Key is

**ualberta 9121 6571**

## Confirmation

▶ You'll receive confirmation that your Class Key has been recognized. Click Yes, this is my class.



Your Class Key has been recognized.

Yes, this is my class.

No, this is not my class.

Verify that this is your class information.

Course: Student Registration Self-Enrollment Demo

Instructor: Jill Staut

Brooks/Cole

# Complete the Log In and Student Information

## Class Information

 Your Class Key has been recognized.

CH 201 - Section 001  
Instructor: Anne Squire (admin)  
WebAssign University

Your institution code is: **webassign**  
You will need this to log into WebAssign.

Please use your CCID as your username. It is what comes before the '@' in your University email address. Eg: **aminus**@ualberta.ca

## Log In Information

Required fields are marked with an asterisk (\*).

Preferred Username \*    
*Your username may contain letters, numbers, and the following characters: underscore (\_), hyphen (-), period (.)*

Institution Code **webassign**

Password \*

Re-Enter Password \*   
*Passwords are case-sensitive.*

## Student Information

Required fields are marked with an asterisk (\*).

First Name \*

Last Name \*

Email Address \*

Student ID Number

## How Do I Pay for WebAssign?

- ▶ After logging in, you will see a notice that shows you payment options:
  - To register, enter your access code if you have an access code card.
  - If you do not have an access code card, you can buy an access code online with a credit card or by using a PayPal account or purchase one at the Special Services desk at the bookstore.
  - You can also access your course under a free 14 day trial period.
    - After the Grace Period ends, you must enter an access code to continue working on assignments and accessing your grades.

# Payment/Code Registration Screen

WebAssign

Thursday, May 20, 2010 03:15 PM EDT

Logged in as cjDavis@webassign

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PHY 101 Lab 2, Spring 2010

[Home](#)

Charles Davis  
Instructor: Dr. Sharon Martin  
WebAssign University

## WebAssign Notices

 According to our records you have not yet redeemed an access code for this class or purchased access online.

The grace period will end Monday, May 31, 2010 at 12:00 AM EDT. After that date you will no longer be able to see your WebAssign assignments or grades, until you enter an access code or purchase access online.

I would like to:

- purchase access online
- enter an access code (purchased with textbook or from a bookstore)
- continue my trial period (10 days remaining)

[Continue](#)

## What Does Your Access Code Look Like?

### ▶ EWA with eBook

**CENGAGE Learning**

**ENHANCED WebAssign**

**HOMWORK & eBook**

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The most widely-used online homework management system is **your** ticket to a better grade.

**Your instant access includes some or all of the following enhanced features depending on the book selected by your instructor:**

- Lifetime of Edition\*** access to thousands of homework problems
- Read It** — An interactive eBook that includes highlighting, bookmarking, and note taking capabilities
- Watch It** — Videos of worked examples and exercises from the text
- Practice It** — Problem-specific tutorials
- Chat About It** — Live, online help from experienced instructors

**ACCESS CARD PREFIX: EWA&eBook-STB**

\*Lifetime of Edition means: You are allowed unlimited access to WebAssign courses that use this edition of this Cengage Learning textbook at no additional cost. This allows you to retake the course until you pass, or to take a multi-term course at no additional cost.

**ACTIVATE BY JUNE 1 2012**

[www.webassign.net/login.html](http://www.webassign.net/login.html)

Access to the Online Homework Management System Selected by Your Instructor

For Courses:  
Basic Math • Prealgebra • Elementary Algebra • Intermediate Algebra • Elementary & Intermediate Algebra • Algebra for College Students • College Algebra • Trigonometry • Algebra and Trigonometry • Precalculus • Finite Math • Liberal Arts Math • Applied Calculus • Linear Algebra • General Intro Statistics • Statistics for Engineers • Astronomy • Liberal Arts Physics • Liberal Arts Chem • Intro/Prep Chem

## Entering Your Access Code

### WebAssign Notices

 According to our records you have not yet redeemed an access code for this class or purchased access online.

The grace period will end Monday, August 16, 2010 at 12:00 AM EDT. After that date you will no longer be able to see your WebAssign access online.

I would like to:

- purchase access online
- enter an access code (purchased with textbook or from a bookstore) 
- continue my trial period (11 days remaining)

Choose the appropriate prefix from the menu below. If your access code is not listed please contact your instructor.

Continue

# Your Home Page

## Home

Sarah Kochanski  
 Student Registration Self-  
 Enrollment Demo, Fall 2010  
 Instructor: Jill Staut  
 Brooks/Cole

### WebAssign Notices

You have until Monday, May 31, 2010 at 12:00 AM EDT to enter an access code or purchase access online. [Get access now.](#)

### My Assignments

#### Current Assignments (3)

Name	Due
Chapter 1.1 Assignment	Jun 1 2010 02:09 AM EDT
Chapter 1.2 Assignment	Jun 4 2010 02:09 AM EDT
Chapter 1.3 Assignment	Jun 8 2010 02:10 AM EDT

Access Assignments

### Communication

No current forums

### Grades

No grades have been posted at this time

View Grades

### Announcements

#### Welcome to Intermediate Algebra

We'll be using Enhanced WebAssign as an online homework tool and you will have weekly assignments and quizzes that are due before your Tutorial sessions each week.

### My Calendar



May 2010

### About this Class



Purchase: [Course access](#) | [eBook](#)

Access eBook if available.

Class Started: Thursday, May 27, 2010  
 Class Ends: Friday, June 25, 2010

# Homework Assignments

2.  -1 points  Notes

Solve and check.

$$20 - 2t = 16$$

t =

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3.  -6 points  Notes

*This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive a score for that part, and you will not be able to come back to the skipped part.*

## Tutorial Exercise

Solve and check.

$$29 - 2t = 15$$

[Click here to begin!](#)

Need Help?

[Read It](#)

[Practice It](#)

[Chat About It](#)

## MathPad, PhysPad, CalcPad

- ▶ EWA includes entry palettes to allow you to easily enter the appropriate notation (when required) to submit your answers.

The screenshot shows the mathPad interface. On the left is a vertical toolbar with buttons for basic operations (+, -, ×, ÷), fractions, square roots, and a list of categories: Functions, Symbols, Relations, Sets, Trig, and Help. The main area displays the problem: "Solve the formula for the variable  $h$ ." followed by the formula  $V = \frac{1}{3}\pi r^2 h$ . Below the formula, the answer  $h = \frac{3V}{\pi r^2}$  is shown in a box. A red arrow points from the text "Click to display more buttons" to the "Relations" button in the toolbar. Another red arrow points from the text "Type a value or expression in the placeholder box" to the input field in the answer box.

Click to display more buttons →

→ Type a value or expression in the placeholder box

## Your Integrated Youbook (e-book)

ELEMENTARY INTERMEDIATE ALGEBRA  
FOURTH EDITION

Tussy Gustafson

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**Self Check 1** Find an equation of the line that has slope  $-2$  and passes through  $(4, -3)$ . Write the answer in slope-intercept form.

*Now Try* Problems 13 and 19

**2 Write an Equation of a Line Given Two Points on the Line.**

In the next example, we show that it is possible to write the equation of a line when we know the coordinates of two points on the line.

**EXAMPLE 2** Find an equation of the line that passes through  $(-2, 6)$  and  $(4, 7)$ . Write the equation in slope-intercept form.

**Strategy** We will use the point-slope form,  $y - y_1 = m(x - x_1)$ , to write an equation of the line.

**Why** We know the coordinates of a point that the line passes through and we can calculate the slope of the line using the slope formula.

**Solution** To find the slope of the line, we use the slope formula.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 6}{4 - (-2)} = \frac{1}{6}$$

Substitute 7 for  $y_2$ , 6 for  $y_1$ , 4 for  $x_2$ , and  $-2$  for  $x_1$ .

Either point on the line can serve as  $(x_1, y_1)$ . If we choose  $(4, 7)$ , we have

$$y - y_1 = m(x - x_1) \quad \text{This is the point-slope form.}$$

$$y - 7 = \frac{1}{6}(x - 4) \quad \text{Substitute } \frac{1}{6} \text{ for } m, 7 \text{ for } y, \text{ and } 4 \text{ for } x_1.$$

**Success Tip**  
In Example 2, either of the given points can be used as  $(x_1, y_1)$  when writing the point-slope equation. The results will be the same.  
Looking ahead, we usually choose the point whose coordinates will make the computations the easiest.

Students can attach notes to any page

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140 CHAPTER 2 DERIVATIVES

APPLIED PROJECT



...a new roller coaster. By studying the slope of the ascent 0.8 and the slope of the descent  $y = L_1(x)$  and  $y = L_2(x)$  with  $x$  measured in feet. For the track to be smooth, the line segments  $L_1$  and  $L_2$  must meet at point  $P$ . (See the figure.) To simplify the calculations, let the height of the transition point  $Q$  be 100 ft. Write equations in  $a$ ,  $b$ , and  $c$  that will ensure that the track is smooth at the transition point.

- Solve the equations in part (a) for  $a$ ,  $b$ , and  $c$  to find a formula for  $f(x)$ .
- Plot  $L_1$ ,  $f$ , and  $L_2$  to verify graphically that the transitions are smooth.
- Find the difference in elevation between  $P$  and  $Q$ .

The solution to Problem 1 might look smooth, but it might not feel smooth because the piecewise-defined function (consisting of  $L_1(x)$  for  $x < 0$ ,  $f(x)$  for  $0 \leq x \leq 100$ , and  $L_2(x)$  for  $x > 100$ ) doesn't have a continuous second derivative. So you decide to improve the design by using a quadratic function  $g(x) = ax^2 + bx + c$  only on the interval  $0 \leq x \leq 90$  and connecting it to the linear functions by means of two cubic functions:

$$g(x) = kx^3 + lx^2 + mx + n \quad 0 \leq x < 10$$

$$h(x) = px^3 + qx^2 + rx + s \quad 90 < x \leq 100$$

- Write a system of equations in 11 unknowns that ensure that the functions and their first two derivatives agree at the transition points.
- Solve the equations in part (a) with a computer algebra system to find formulas for  $g(x)$ ,  $g'(x)$ , and  $h(x)$ .
- Plot  $L_1$ ,  $g$ ,  $h$ , and  $L_2$ , and compare with the plot in Problem 1(c).

Graphing calculator or computer required  
Computer algebra system required

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2.4 Derivatives of Trigonometric Functions

A review of trigonometric functions is given in Appendix D.

Before starting this section, you might need to review the trigonometric functions. In particular, it is important to remember that when we talk about the function  $f$  defined for all real numbers  $x$  by

$$f(x) = \sin x$$

it is understood that  $\sin x$  means the sine of the angle whose radian measure is  $x$ . A similar convention holds for the other trigonometric functions  $\cos$ ,  $\tan$ ,  $\csc$ ,  $\sec$ , and  $\cot$ . Recall from Section 1.8 that all of the trigonometric functions are continuous at every number in their domains.

If we sketch the graph of the function  $f(x) = \sin x$ , we see that the slope of  $f(x)$  at the origin is 1. In Exercise 16 in Section 2.2, you will see that the slope of the tangent to the graph of  $f(x) = \sin x$  at the origin is 1.

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7E

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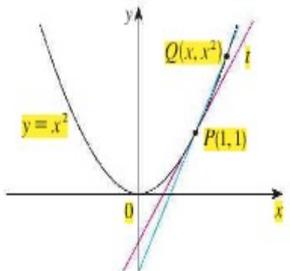
Notes Highlights

Share	Date	Page	Note
●	8/20/11		Study for exam

Highlight the text

Makes notes

All the notes and highlights will be tracked. Access them any time.



Attach the notes to any page

To be specific, let's look at the problem of trying to find a tangent line  $t$  to the parabola  $y = x^2$  in the following example.

**V EXAMPLE 1** Find an equation of the tangent line to the parabola  $y = x^2$  at the point  $P(1, 1)$ .

**SOLUTION** We will be able to find an equation of the tangent line  $t$  as soon as we know its slope  $m$ . The difficulty is that we know only one point,  $P$ , on  $t$ , whereas we need two points to compute the slope. But observe that we can compute an approximation to  $m$  by choosing a nearby point  $Q(x, x^2)$  on the parabola (as in Figure 2) and computing the slope  $m_{PQ}$  of the secant line  $PQ$ . [A **secant line**, from the Latin word *secans*, meaning cutting, is a line that cuts (intersects) a curve more than once.]

We choose  $x \neq 1$  so that  $Q \neq P$ . Then

$$m_{PQ} = \frac{x^2 - 1}{x - 1}$$

For instance, for the point  $Q(1.5, 2.25)$  we have

$$m_{PQ} = \frac{2.25 - 1}{1.5 - 1} = \frac{1.25}{0.5} = 2.5$$

$x$	$m_{PQ}$
2	3
1.5	2.5
1.1	2.1
1.01	2.01
1.001	2.001

The tables in the margin show the values of  $m_{PQ}$  for several values of  $x$  close to 1. The closer  $Q$  is to  $P$ , the closer  $x$  is to 1 and, it appears from the tables, the closer  $m_{PQ}$  is to 2. This suggests that the slope of the tangent line  $t$  should be  $m = 2$ .

We say that the slope of the tangent line is the *limit* of the slopes of the secant lines, and we express this symbolically by writing

$$\lim_{Q \rightarrow P} m_{PQ} = m \quad \text{and} \quad \lim_{x \rightarrow 1} \frac{x^2 - 1}{x - 1} = 2$$

## STEWART CALCULUS

## Early Transcendentals 7E

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VIDEO  
EXAMPLES:

## LECTURE VIDEOS.

A series of hundreds of clips covering all three semesters. Videos will help if you miss a class or are a more visually oriented or auditory learner.



### The Velocity Problem

If you watch the speedometer, you see that the needle doesn't stay still for very long. If you watch the needle from watching the speedometer, you see that the needle how is the "instantaneous velocity" of the car?

**V** Suppose that a ball is dropped from the observation deck of the CN Tower in Toronto, 450 m above the ground.

**SOLUTION** Through experimentation, it is known that the distance fallen by any free-falling object after  $t$  seconds is denoted by  $s(t)$  meters by the equation

The difficulty in finding the instantaneous velocity at a single instant of time ( $t = 5$ ), so no time interval is available, we can approximate the desired quantity by computing the average velocity over the brief time interval of a tenth of a second from  $t = 5$  to  $t = 5.1$ .

These are videos of instructors working through selected Worked Examples from the text. You can stop, rewind, and review complex examples as you work the problem.

you see that the needle is constant. We assume that at each moment, but the example of a falling ball.

observation deck of the CN Tower ball after 5 seconds.

Galileo discovered that the square of the time it takes for the distance fallen. Galileo's law is expressed

working with a single instant of time ( $t = 5$ ), so no time interval is available, we can approximate the desired quantity by computing the average velocity over the brief time interval of a tenth of a second from  $t = 5$  to  $t = 5.1$ .

STEWART **CALCULUS**

Early Transcendentals 7E

animations, written and narrated by Jim Stewart, offer a number of ways to reinforce concepts for review or by using the accompanying exercises and examples.

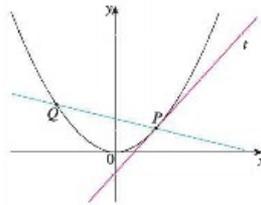


FIGURE 3

**TEC** In Visual 2.1 you can see how the process in Figure 3 works for additional functions.

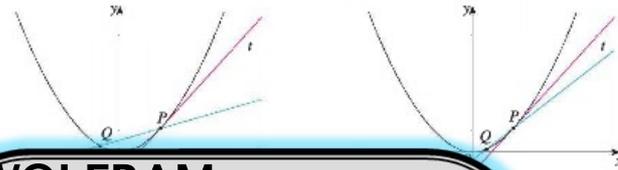
$t$	$Q$
0.00	100.00
0.02	81.87
0.04	67.03
0.06	54.88
0.08	44.93
0.10	36.76



**WOLFRAM DEMONSTRATIONS:** watch a web preview or download the animation to your hard drive to work with the full version. Explore these animations at critical points of your study throughout the text.

FIGURE 4

60% + 🔍 🖱️ 🖨️ ?



## STEWART CALCULUS

Early Transcendentals

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Notes...

Homework Tutor

Tutor Bookmarks

Lesson 2.1.1

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You can click the “Add Bookmark” button to save Exercises to your Tutor Bookmarks panel for easy reference.

All Homework Tutors can also be accessed from the main YouBook toolbar by clicking the down arrow to the left of the icon.

86 CHAPTER 2

## 21 Exercises



1. A tank holds 1000 gallons of water, which drains from the bottom of the tank in half an hour. The values in the table show the volume  $V$  of water remaining in the tank (in gallons) after  $t$  minutes.

$t$ (min)	5	10	20	25	30
$V$ (gal)	694	444	160	0	0

- (a) If  $P$  is the point on the curve at  $t = 5$ , find the slope of the secant line through  $P$  and the point  $(10, 444)$ .
- (b) Estimate the slopes of two secant lines through  $P$  and the point  $(20, 160)$ .
- (c) Use a graph of the curve to estimate the slope of the tangent line at  $P$ .

2. A cardiac monitor is used to measure the heart rate of a patient after surgery. It records the number of heartbeats over a period of time. When the data are plotted, the resulting curve is shown in the figure. The tangent line represents the instantaneous heart rate at the time indicated.

$t$ (min)	42
Heartbeats	180

The monitor estimates the instantaneous heart rate at  $t = 42$  minutes using a secant line. Use the data in the table to estimate the heart rate after 42 minutes using

- (c) Using the slope from part (b), find an equation of the tangent line to the curve at  $P(0.5, 0)$ .
- (d) Sketch the curve, two of the secant lines, and the tangent line.
5. If a ball is thrown into the air with a velocity of 40 ft/s, its height in feet  $t$  seconds later is given by  $y = 40t - 16t^2$ .
- (a) Find the average velocity for the time period beginning

The Homework Tutors are composed of three parts:

- 1) Problem statement from the textbook
- 2) Homework Hints which were written by Jim Stewart and are intended to guide you if you're stuck.
- 3) Video Solutions

Search...

velocity  
byervals:  
1.1]5  
25.8

## Resetting Your Password

- Log in, then click **My Options** in the upper right corner.

Enter an email address if none is listed.

- ▶ In **Change Password**, enter your new password, then re-enter your new password for confirmation.
- ▶ Enter your current password in the upper left corner.
- ▶ Click **Save**.

Email Address

Change Password

New Password

Re-enter New Password

---

*If you changed any information above, enter your current password and click Save.*

Password

## What if I Forget My Password?

- Click **Reset Password** on the Login Page.

**WebAssign Login**

**Welcome to WebAssign!**

Use the username, institution, and password provided by your instructor or account representative.

**Username**

**Institution** [\(what's this?\)](#)

**Password** [\(Reset Password\)](#)

**LOG IN** → [\(Trouble Logging In?\)](#)

- You will need your username, institution code and the email address for your account.
- Otherwise, your instructor is able to reset your password.

## Student Guide

- ▶ Links to the WebAssign Student Guide are available on your Login Page and after logging in.
  
- ▶ The Student Guide Explains
  - How to access and open assignments.
  - How to answer various types of questions.
  - How to ask your teacher for help.
  - How to view scores and grades.
  - How to find additional resources.

## Need Help?

- ▶ Your course is supported by a TA. Reach him by clicking the 'Ask Your Teacher' link. **NOTE: Use only for any answer/solution discrepancies or concerns about questions. This is not technical support or homework help (see below).**
- ▶ Phone support: (800) 955-8275, then press 1
- ▶ Email support: [student\\_help@webassign.net](mailto:student_help@webassign.net)
- ▶ See the WebAssign support page at [www.webassign.net/user\\_support/student/](http://www.webassign.net/user_support/student/) for support hours

## Your course text materials are now available!!

- ▶ Your professors have carefully selected your course materials. **Visit your campus bookstore to find these options.**

- ▶ **Hi! I'm Andria, your Nelson rep.**



- ▶ **ALSO:** Student office hours for questions about the text and/or EWA will be held on:
  - ▶ Wednesday Jan. 18<sup>th</sup> Rm. CAB 563 12pm–2:30pm
  - ▶ Tuesday Jan 24<sup>th</sup> Rm. CAB 572 11:30am–2:00pm

Good luck & have a  
great school year!