Welcome to Day One

MATH 115 Section T1
Instructor: Vlad Yaskin
Winter 2012

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

TRANSFORMING **LEARNING.** TRANSFORMING **LIVES.**

ENHANCED WebAssign

NELSON EDUCATION | Canada's Learning Advantage

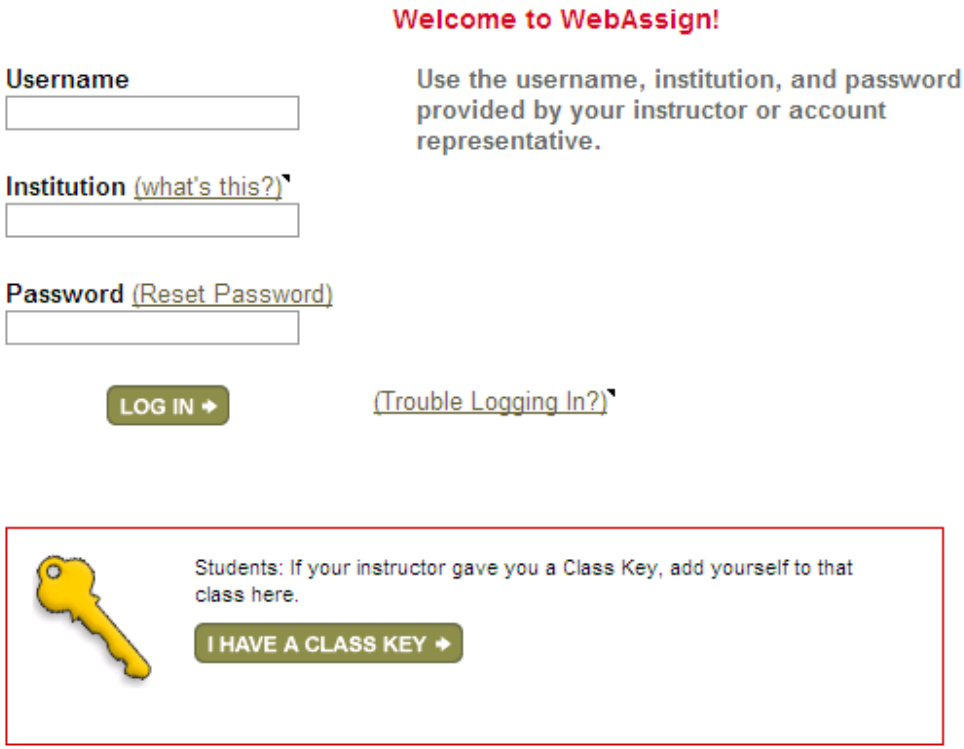
Enhanced WebAssign

- 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.

ENHANCED WebAssign

So, How Do I Log In?

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



ENHANCED WebAssign

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

brookscole | 2742 | 8826

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

Submit

How to Self-Enroll in WebAssign

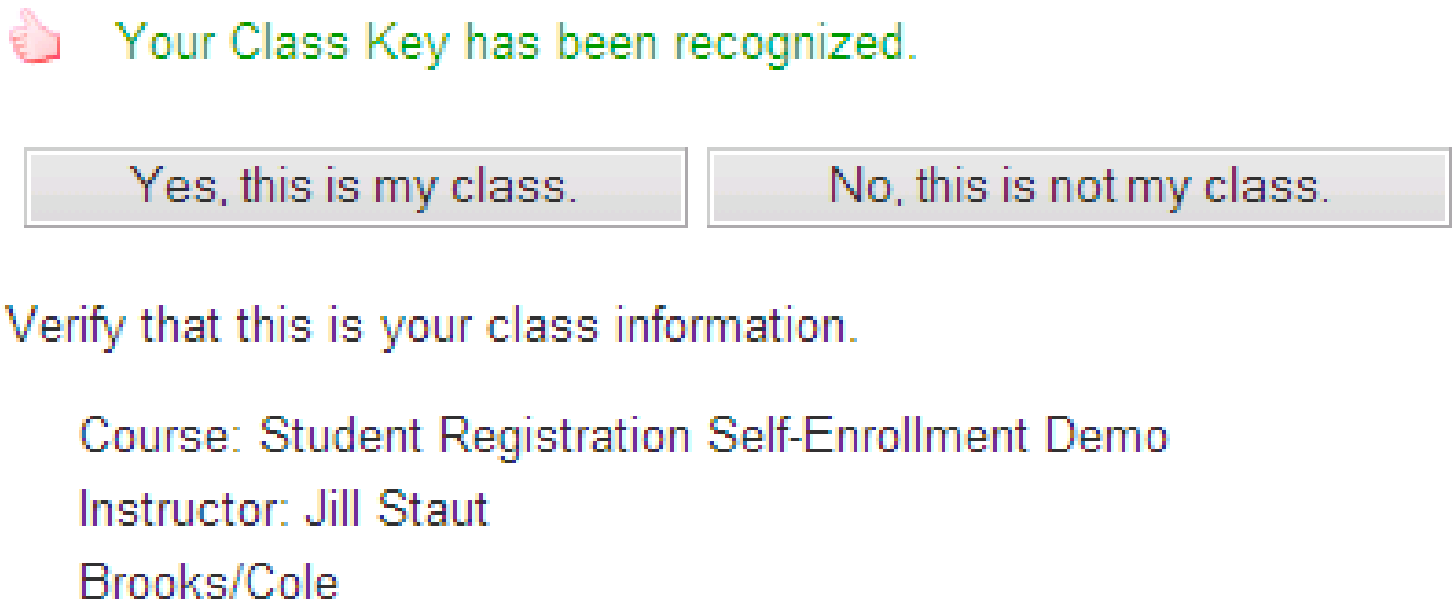
Your instructor has decided to allow students to self-enroll into this WebAssign course.

- Your Class Key is

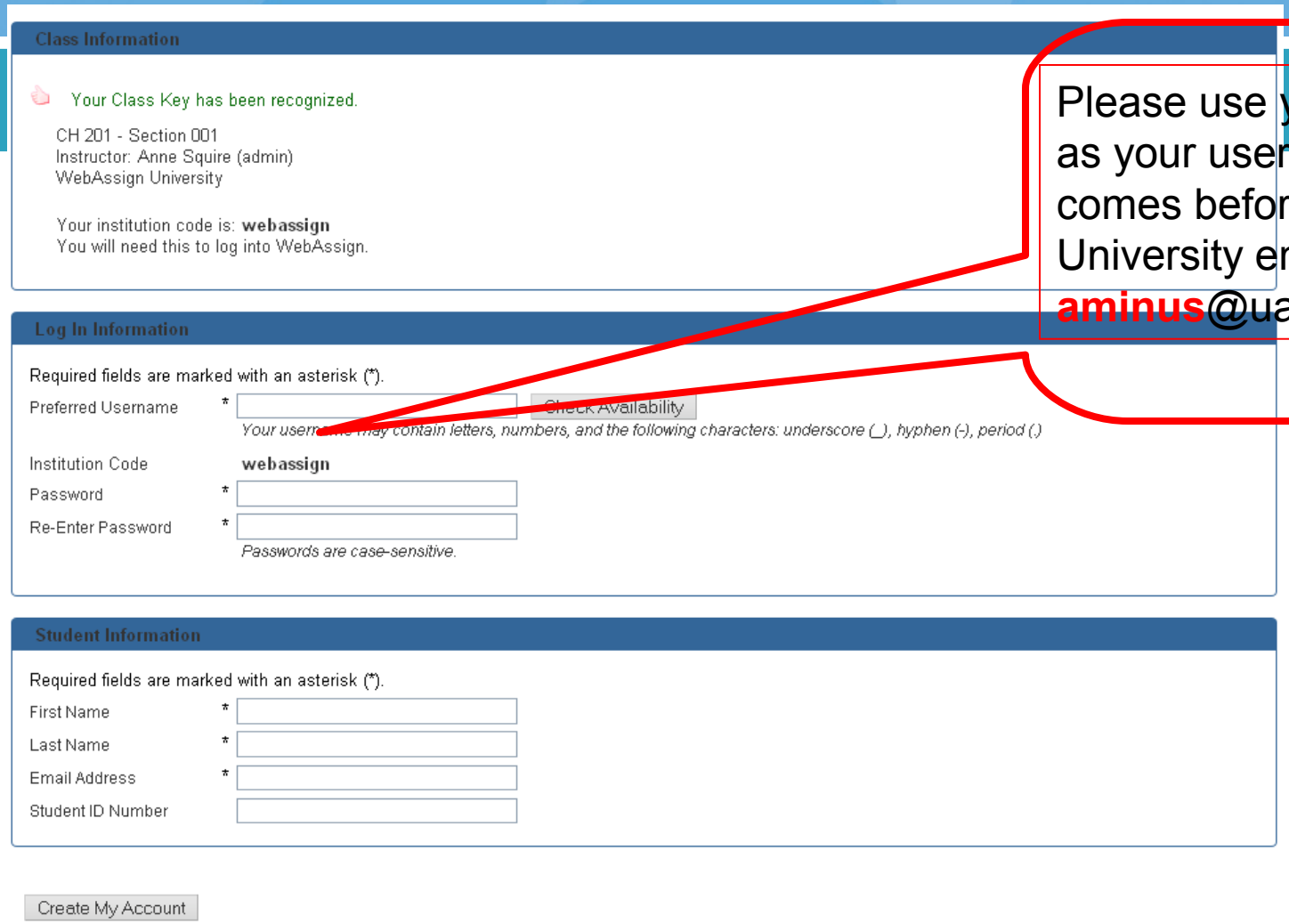
ualberta 9121 6571

Confirmation

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



Complete the Log In and Student Information



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

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.

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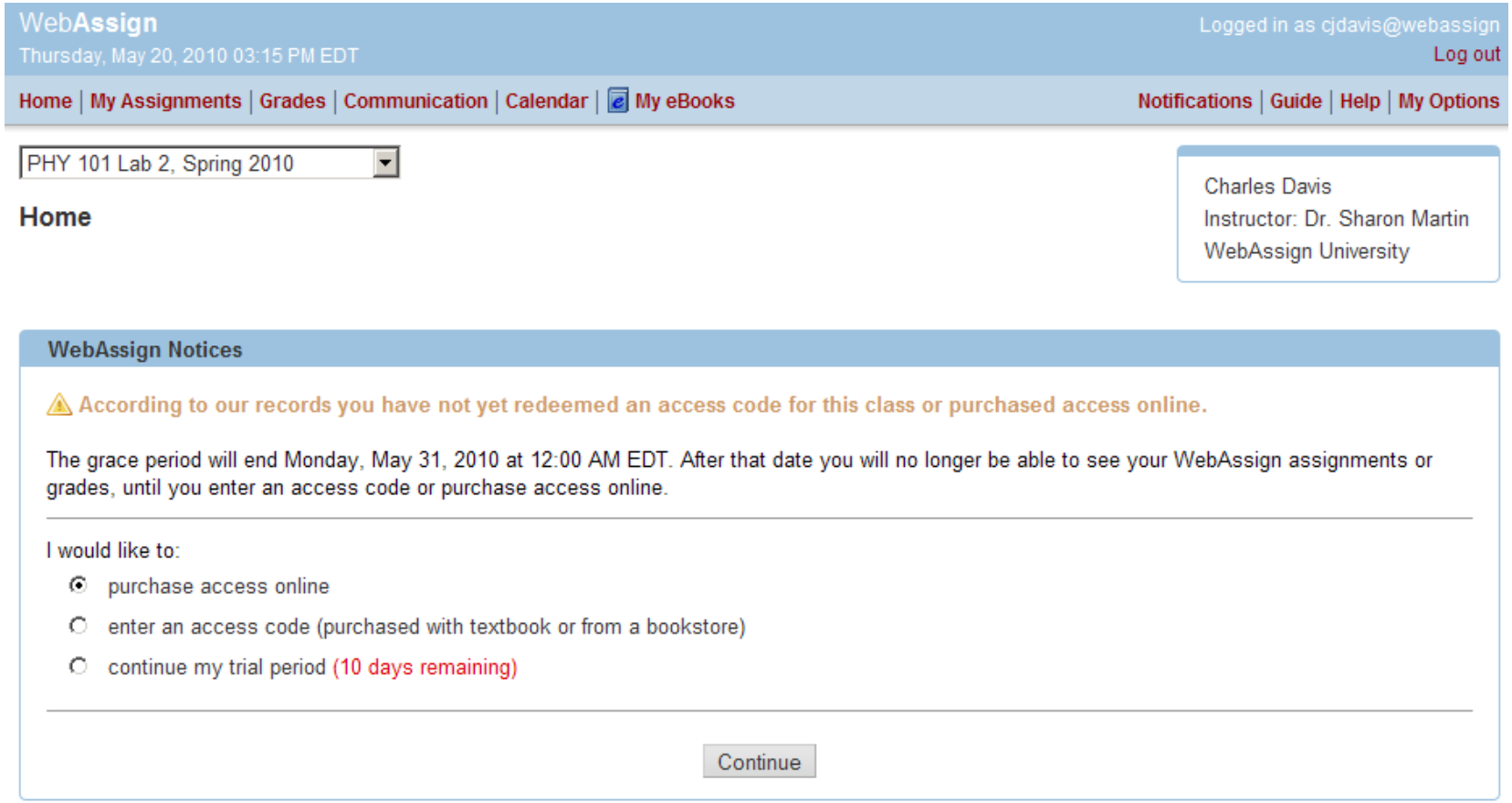
Payment/Code Registration Screen



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What Does Your Access Code Look Like?

- EWA with eBook

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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.

EWA&eBook-STB | NZMM | 2588 | BGJJ | 4377

Continue

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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 Internediate 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

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Homework Assignments

2. –/1 points Notes

Solve and check.

$20 - 2t = 16$

$t =$ ☐

Need Help? Read It | Practice It | Master It | Chat About It

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 not be able to come back to the skipped part.

Tutorial Exercise

Solve and check.

$29 - 2t = 15$

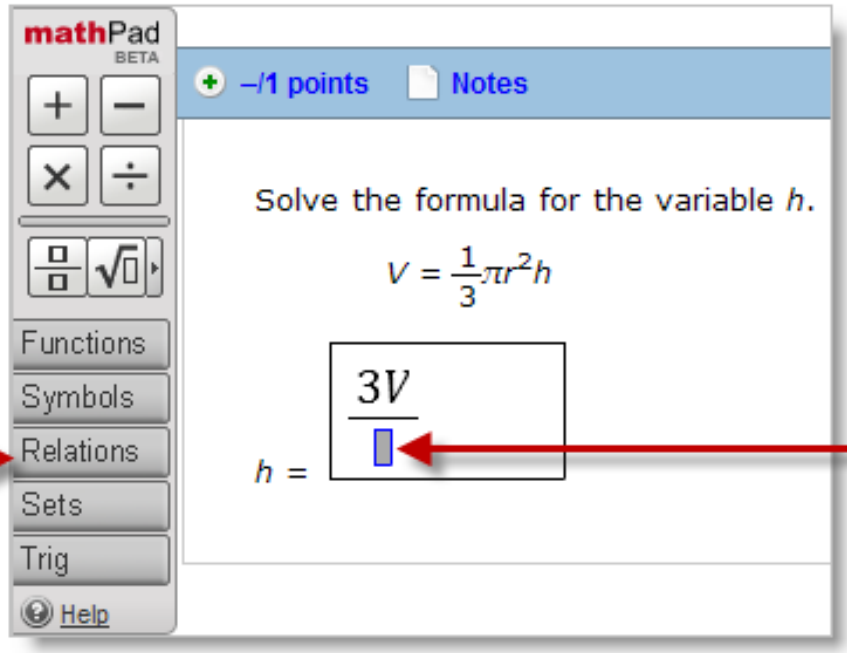
Click here to begin!

Need Help? Read It | Practice It | Chat About It

ENHANCED WebAssign

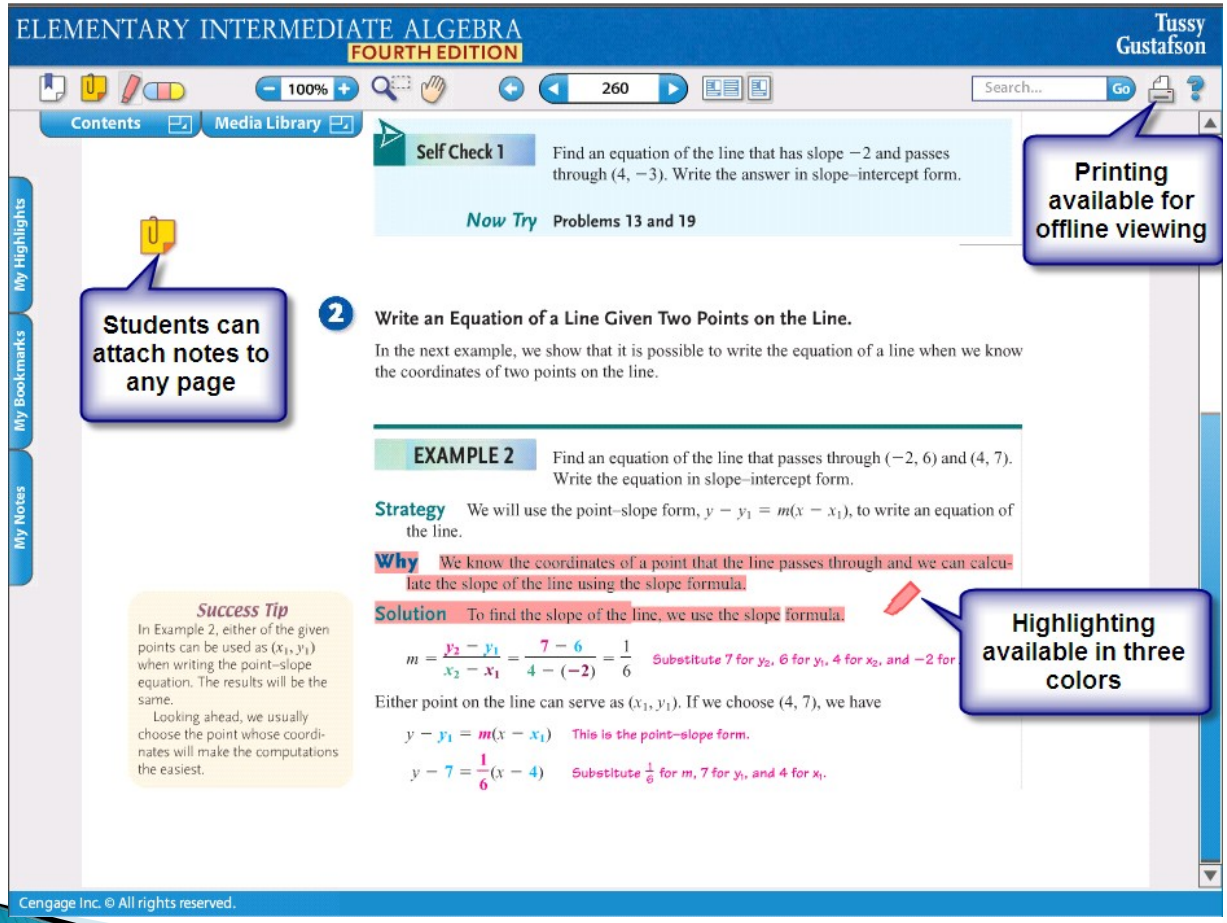
MathPad, PhysPad, CalcPad

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



ENHANCED WebAssign

Your Integrated Youbook (e-book)



ENHANCED WebAssign

Access all integrated Media Study Tools

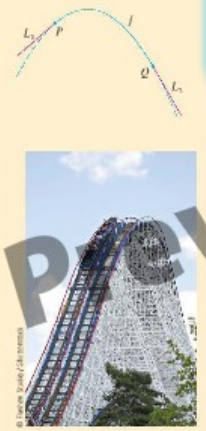
Access the TOC

Zoom in for larger viewing

Print for offline viewing

Table of Contents

APPLIED PROJECT



a new roller coaster. By studying ... slope of the ascent 0.8 and the slope ... matches $y = L_1(x)$ and $y = L_2(x)$ with ... are measured in feet. For the track ... want the linear segments L_1 and L_2 ... (See the figure.) To simplify the ... Q is 100 ft. Write equations in a, b, and c that will ensure that the track is smooth at the transition points.

(b) Solve the equations in part (a) for a, b, and c to find a formula for $f(x)$.

(c) Plot L_1, f, and L_2 to verify graphically that the transitions are smooth.

(d) Find the difference in elevation between P and Q.

2. The solution in 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 $0 \le x \le 100$, 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 $q(x) = ax^2 + bx + c$ only on the interval $10 \le x \le 90$ and connecting it to the linear functions by means of two cubic functions:

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

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

(a) Write a system of equations in 11 unknowns that ensure that the functions and their first two derivatives agree at the transition points.

(b) Solve the equations in part (a) with a computer algebra system to find formulas for $g(x)$, $q(x)$, and $h(x)$.

(c) Plot L_1, g, q, h, and L_2, and compare with the plot in Problem 1(c).

Graphing calculator or computer required

Computer algebra system required

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 func... of $f'(x)$ as the slope of the tangent to the si... Exercise 16 in Section 2.2), then it l... curve

Choose a page #

Change the page view

Highlight the text

Makes notes

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

Attach the notes to any page

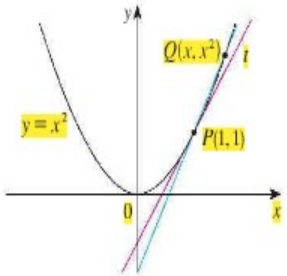
To be specific, let's look at the problem of trying to find a tangent line t to the parabola $y = x^2$ in the following example.

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

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



FIG

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

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

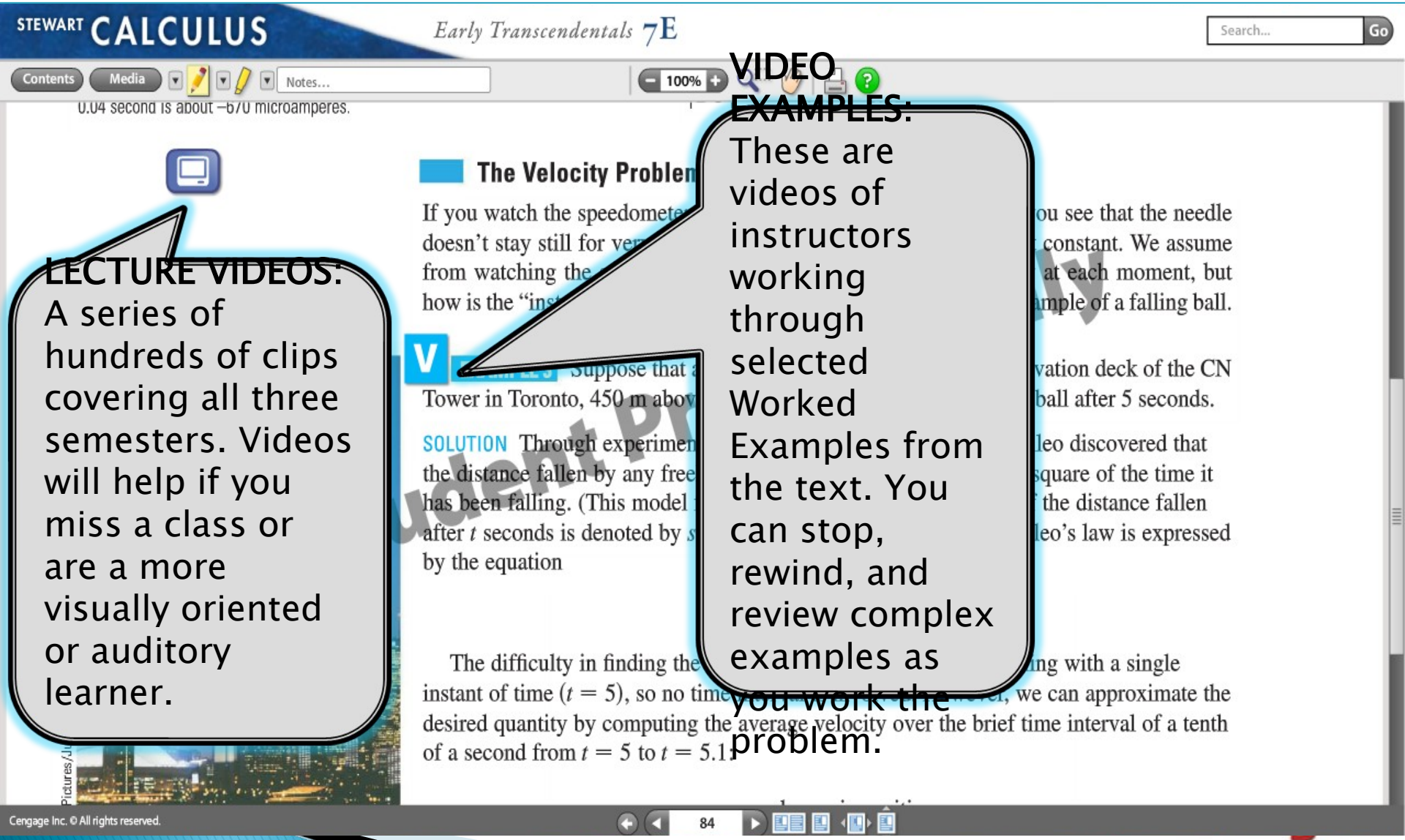
x	m_{PQ}
2	3
1.5	2.5
1.1	2.1
1.01	2.01
1.001	2.001

x	m_{PQ}

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

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



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.

VIDEO EXAMPLES: 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.

STEWART CALCULUS Early Transcendentals 7E

Search...

60%

TEC 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.

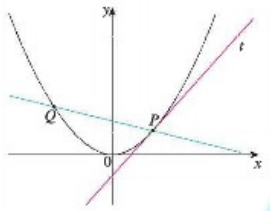


FIGURE 3

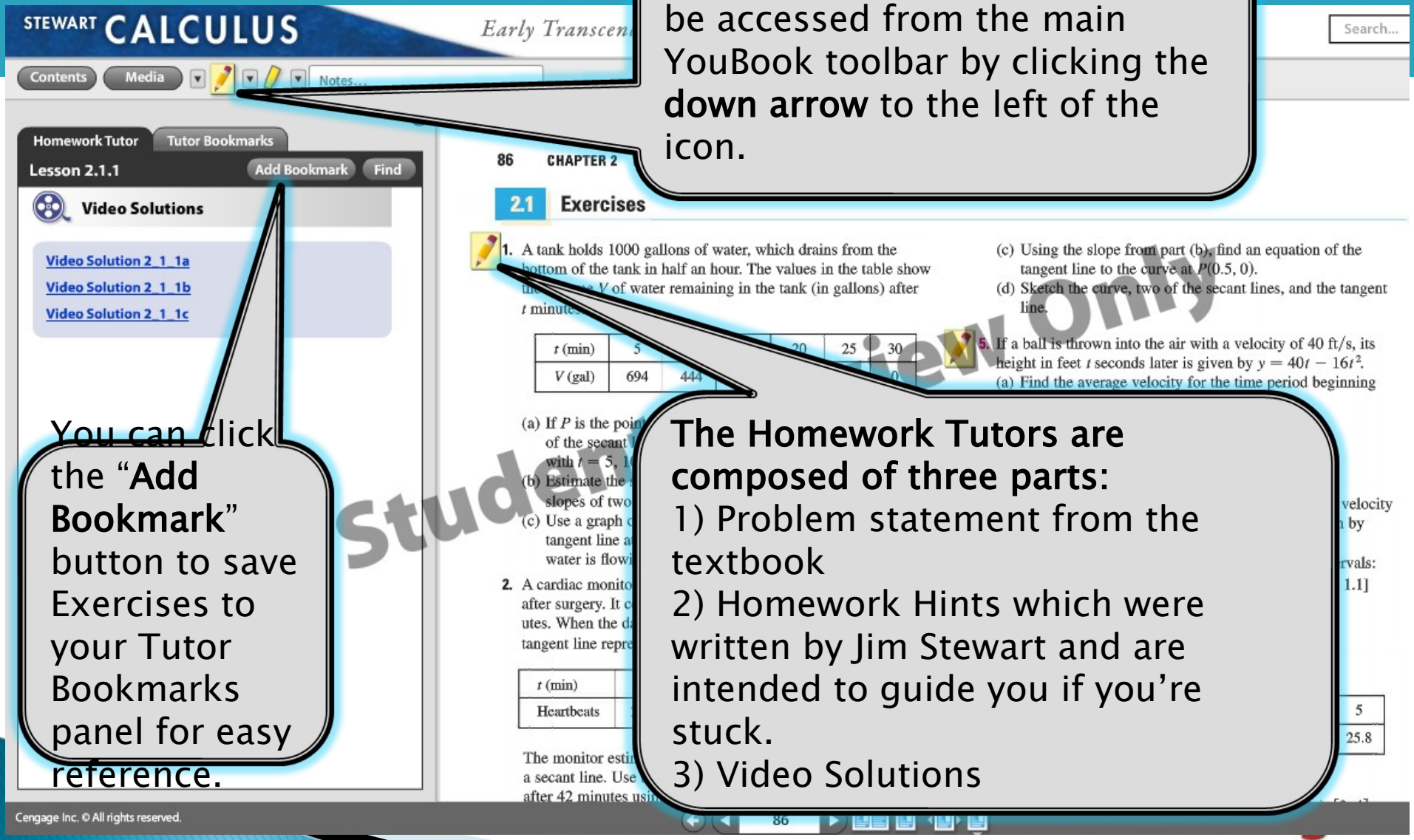
TEC In Visual 2.1 you can see how the process in Figure 3 works for additional functions.

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

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



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

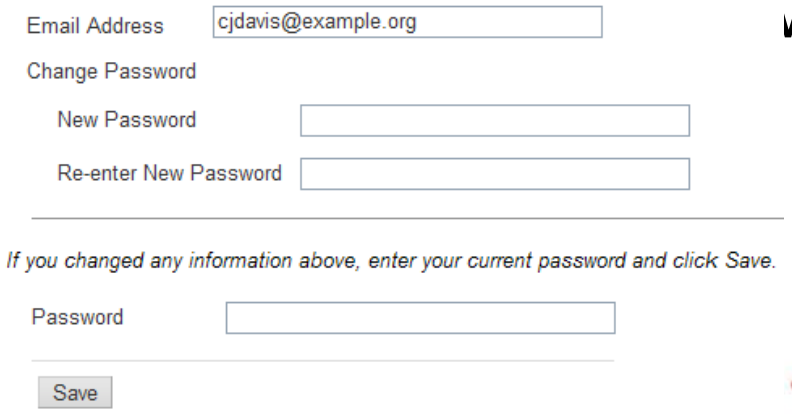
The Homework Tutors are composed of three parts:
1) Problem statement from the textbook
2) Homework Hints which were written by Jim Stewart and are intended to guide you if you're stuck.
3) Video Solutions

Resetting Your Password

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

Enter an email address if none is listed.

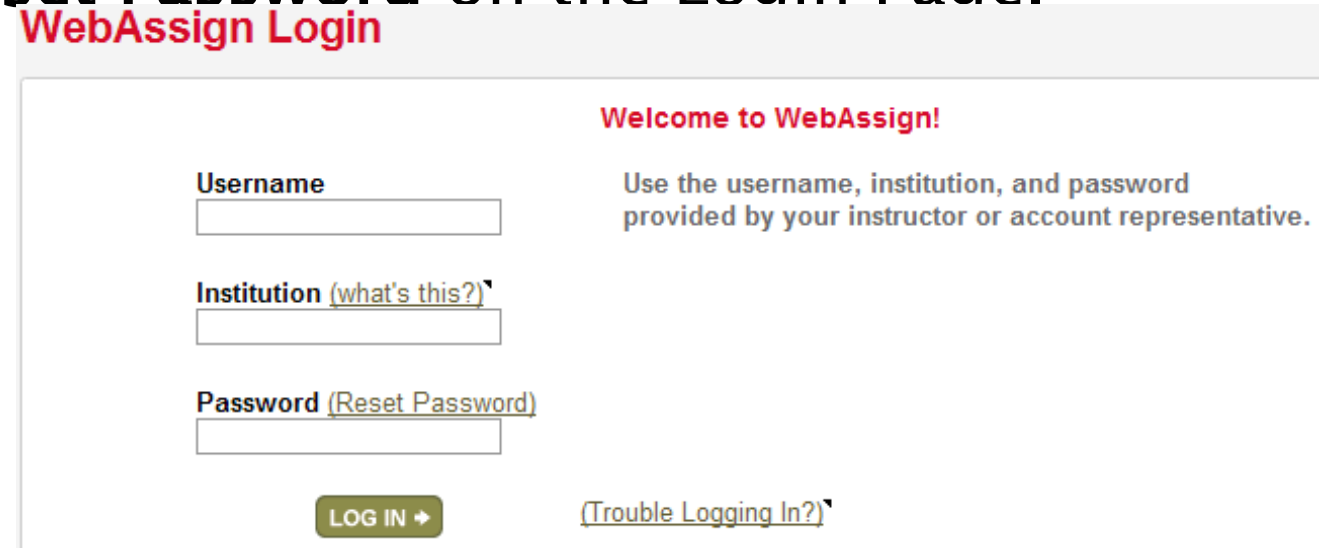
- In **Change Password**, enter your new password, then re-enter your new password for confirmation.
- Enter your c wer left corner.
- Click **Save**.



ENHANCED WebAssign

What if I Forget My Password?

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



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

ENHANCED WebAssign

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
- See the WebAssign support page at www.webassign.net/user_support/student/ for support hours

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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. 18th Rm. CAB 563 12pm-2:30pm
- Tuesday Jan 24th Rm. CAB 572 11:30am-2:00pm

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Good luck & have a great school year!