Course: 112 - College Algebra
Section: 010
Times: MWF 11:00–11:50 AM
Text: *College Algebra* U of A Ed.
Ruud & Shell
Websites: http://math.arizona.edu/∼algebra/math112
http://math.arizona.edu/∼cjewell/112

Instructor: Chris Jewell
Office: Math 309
Email: cjewell@math.arizona.edu
Office Hours: Tue 10:00–11:00
Thu 11:00–12:00
Fri 12:00–1:00

Homework Policy

Homework and quizzes together represent 150 points of your final grade. Homework will be submitted in two formats: a computer grading program called MyMathLab will be used, along with "traditional" hand-written homework. Hand-written homework will account for 50 points, quizzes will be worth 50 points, and MyMathLab homework will account for the remaining 50 points of the total homework/quiz score.

The hand-written assignments can be found by following the Homework Assignments link from the course homepage or the Course Calendar link from MyMathLab. You will find a list of assignments, each in the form of a pdf file. You are expected to print the relevant assignment, and complete your work on those sheets.

The online assignments will be completed and submitted via MyMathLab. Information regarding registering for MyMathLab can be found on the following pages.

On the homework webpage, you will also find a set of homework labeled 'Suggested'. This is exactly what the name implies: these are problems which should be done for your benefit, but will not be collected. They should not be taken lightly; Even though you will not receive any direct credit for the recommended problems, doing them will pay dividends. You will find the required problems much more bearable if you have first done the recommended problems which will usually form a basis for the more difficult required ones.

Quizzes will be given on a regular basis and will be similar to the suggested problems from the textbook. *This seems like another good reason to do the suggested problems.*

At the end of the semester, roughly 10% of the lowest scores of each type (written homework, quizzes, and MML homework) will be dropped. Each will then be scaled down to a score out of the appropriate number of points. Other in-class assignments may also be given and counted in the written portion of the homework/quiz score.

Discussion of homework problems ("working together") is encouraged, but each student is required to write his/her OWN solutions. Students are advised to seek help whenever needed. Students are also encouraged to ask questions during office hours and to use the free tutoring available.

Specific Written Homework Procedures:

- Homework is due at the beginning of the class period. No exceptions.
- If homework requires the use of your own paper, it should be done on regular (white) $8\frac{1}{2}" \times 11"$ notebook paper. No fringes or loose spiral binding.
- Multiple pages should be STAPLED together. Crazy corner origami is NOT a staple.
- Each problem should be neatly written, with all intermediate steps included. Written explanations should be included whenever appropriate. If necessary, answers should include units. Graphs should be neat and have units clearly labeled.
- Answers should be clearly indicated (boxed, circled, highlighted, etc.)
- Wherever practical, answers given should be exact, unless the problem asks you to estimate.
- Correct answers not supported by work will not receive credit.
- There are numerous ways to find the assignments and their due dates, so "not knowing that something is due" is not an acceptable excuse.
- If your writing is illegible I will likely be unable to understand your solution and will be able to assign at most minimal credit. It is in your interest to write neatly.
- If you have questions on the required or optional homework, do not hesitate to visit my office hours or email me. If you do email me, it is always helpful to include a description of what you have tried and what you are confused about. Questions such as "I am having trouble with number 7" are difficult to address directly.
- **Do not use the paper you are going to turn in as scratch paper. Work you do not use may make your solution unclear and cause you to lose points. Instead, do the work on a separate sheet of paper and then carefully transcribe your solution onto the sheet you intend to turn in.**

Any assignments not meeting these guidelines may not be accepted or not graded.

Homework is an essential component of the course, whether it is assigned for grading or not.

Succeeding in Math 112

Math 112 can be a difficult course. Some of the things which can hinder student success are weak algebra skills, too little time studying, absence from lectures, and failure to use resources which are available for assistance. Many times these pitfalls are caused by a sense of confidence, since many students have "seen" the material in this course previously. While the mathematical content in this course may be very similar to that which was covered in a previous course, the depth which we will cover the concepts and which you will be expected to be comfortable and competent with the material will almost certainly be new.

Some ways that this course may differ from previous courses covering the same general material are the following:

- Grading will not be effort based, but rather will be based on the accuracy of both approach and actual solution.
- The goal is not simply to get the "right answer" to a problem– it is to be able to coherently write a *solution* to the problem.

  The final page shows four attempts at the same problem. In each case, the right answer $(4x + 11)$ is given, yet only one contains a truly correct, well written solution. If this problem was worth 5 points, example a) would receive all 5 points; b) and c) would likely receive 4 points, and d) would earn at most 3 points.

- Exams will not simply be a rehashing of homework problems.

  Some questions on exams will not be replicas of questions that you have exactly seen before. The topic(s) that the question is testing will be one(s) which we covered, but it may be asked in a new way. This is not meant to "trick" you or unnecessarily make things more confusing; It is intended to test whether you truly understand the underlying concept and can apply it in a slightly new context.

Succeeding in this course generally requires more time and effort than most students are accustomed to having to put into a single course. The general rule of thumb is that you should expect to spend about 3-4 hours per week working outside of class for each hour (unit) of time in class. As this is a 3 unit class, this means you should spend approximately 10 hours per week working on this course outside of class. This is strictly an approximation and a general guideline. Each student is different, and many students need to spend more than 10 hours per week; Few students need to spend less to truly be successful. This amount of time outside of class is very likely a large adjustment from what you are used to. The sooner students embrace this extra level of effort, the more successful they generally are.

This is a college class, and as such, the responsibilities for learning and success are on you, the student. While ultimately it is you that are responsible for your success, you are not alone. There are many resources available for assistance, but it is you that need to be proactive in your learning and use these resources if necessary. Once you fall behind, it is very difficult to catch back up; Do not fall behind! If you feel you are struggling to understand the material and complete the assignments, be proactive and seek assistance before it becomes a bigger problem. The University offers tutoring services for this course via The Think Tank (http://thinktank.arizona.edu). If necessary, you should make use

of this service, as well as coming to office hours for further assistance. My office hours are listed in the header of the first page, and I am generally available on a walk-in basis as well. I will offer any assistance I can in helping make this an enjoyable and educationally successful course.

MyMathLab

To register for **Math 112 - Section 010:**

1. Go to http://www.mymathlab.com.
2. Under Register, click 

3. Enter the course ID: **jewell82035**, and click **Continue**.
4. Sign in with an existing Pearson account or create an account:
   - If you have previously used a Pearson website (for example, MyITLab, MyMathLab, MyPsychLab, MyBioLab, etc.), enter your Pearson username and password. Click **Sign In**.
   - If you do not have a Pearson account, click **Create**. Write down your new Pearson username and password to help you remember them.
5. Select an option to access the online course:
   - Use the access code that came with your textbook or that you purchased separately from the bookstore.
   - Buy access using a credit card or PayPal.
   - If available, get 17 days of temporary access. (Look for a link near the bottom of the page.)
6. Click **Go To Your Course** on the Confirmation page. Under MyLab / Mastering New Design on the left, click **Math 112 - Section 010** to start your work.

To sign in later:

1. Go to http://www.mymathlab.com.
2. Click **Sign In**.
3. Enter your Pearson account username and password. Click **Sign In**.
4. Under MyLab / Mastering New Design on the left, click **Math 112 - Section 010** to start your work.

Additional Information

See **Students** > **Get Started** at http://www.pearsonmylabandmastering.com for more detailed instructions on registering with an access code, credit card, PayPal, or temporary access.

Simplify the difference quotient $\dfrac{f(x+3)-f(x)}{3}$ for the function $f(x)=2x^2+5x$.

a)

Full Credit

$$\begin{aligned}\frac{f(x+3)-f(x)}{3} &= \frac{2(x+3)^2+5(x+3)-(2x^2+5x)}{3}\\ &= \frac{2(x^2+6x+9)+5(x+3)-(2x^2+5x)}{3}\\ &= \frac{2x^2+12x+18+5x+15-2x^2-5x}{3}\\ &= \frac{12x+33}{3}\\ &= \boxed{4x+11}\end{aligned}$$

b)

Loss of Points

$$\frac{2(x+3)^2+5(x+3)-(2x^2+5x)}{3}$$
$$\frac{2(x^2+6x+9)+5(x+3)-(2x^2+5x)}{3}$$
$$\frac{2x^2+12x+18+5x+15-2x^2-5x}{3}$$
$$\frac{12x+33}{3}$$
$$\boxed{4x+11}$$

c)

Loss of Points

$$\begin{aligned}&= \frac{2(x+3)^2+5(x+3)-(2x^2+5x)}{3}\\ &= \frac{2(x^2+6x+9)+5(x+3)-(2x^2+5x)}{3}\\ &= \frac{2x^2+12x+18+5x+15-2x^2-5x}{3}\\ &= \frac{12x+33}{3}\\ &= \boxed{4x+11}\end{aligned}$$

d)

Loss of Points

$$\begin{aligned}\frac{f(x+3)-f(x)}{3} &= \frac{2(x+3)^2+5(x+3)-(2x^2+5x)}{3}\\ &= 2(x^2+6x+9)+5(x+3)-\left(2x^2+5x\right)\\ &= 2x^2+12x+18+5x+15-2x^2-5x\\ &= \frac{12x+33}{3}\\ &= \boxed{4x+11}\end{aligned}$$