

Starting with Lesson 3, (skipping Lesson 4), and running for the rest of the semester, you will be completing your homework online, using SAGE, the Math Department's online homework system. You will complete Lesson 4 on paper and bring it to class.

The program is easy to use and indicates immediately whether an answer is correct or incorrect. If the answer is incorrect, multiple tries are allowed, at no penalty, until the correct answer is found. The problems are similar to those in the text and they line up with the problems on the assignment sheet one-for-one.

Technical stuff:

- **Web Site:** Go to the Math 154 web page at www.math.purdue.edu/MA154 and hit the link to SAGE.
- **Username and Password:** These refer to your Purdue Career Account.
- **Problems?** Go to the MA 154 web page to link to the SAGE Discussion Board to have questions answered. It is an open forum that will have a live moderator Sunday night, Tuesday night and Thursday night from 8:00 PM to 10:00 PM to answer your questions. He will also answer questions posted during off hours.

Getting started:

- Go to the web site listed and log in using the above instructions.
- Click on the pull down menu for "Choose a lesson", highlight "3", and click on "Go to that lesson".
- Problem #1 should appear. If not, repeat the above procedure for "Choose a problem"
- When Problem #1 does appear, work out the problem; type your answer in the box provided, and click, "Submit answer."
- If the answer is correct, the box disappears and the answer cannot be changed.
- If the answer is incorrect, the box remains and you need to calculate and enter a different answer. Keep trying, as there is no penalty for multiple attempts.
- When the answer is correct, or you have given up, go to the top of the page and scroll to, "Problem #2". Click, "Go to that problem" You are now off and running.
- Lessons will always be due at midnight on the day you review the homework in class, except for the ones due Friday, they will be due Saturday night at midnight.
- You will still be able to access and answer the questions to lessons whose deadlines have passed; however, you will not receive any additional credit.
- Each homework assignment is worth 10 points.
- Notice that the top of each problem tells you the chapter, section and problem number from the text.
- **Note:** Not all problems from the assignment sheet are programmed in SAGE. The ones not in SAGE are printed in **bold print** on the assignment sheet. You should work these problems on paper and bring them to class. They will not be graded; however, they represent potential exam questions.

System Stuff:

- You can work from a home computer or from a Purdue lab.
- Problem sets are individually generated for each student. While your questions will be similar to other students' questions, your answers will not be the same.
- Your problem set does not change no matter how many times you log in or out. You can print out your questions, log out, work them, log back in, and test your answers. You will always have the same problems with the same numbers.

- Use the print button on your browser to print out each problem. That will generate one page per problem.
- Students in the past have copied and paste the problems one at a time to a Word document and printed them all out on one page.
- The system is set to log you out if your session has been inactive for twenty minutes. If you walk away from the computer or take a long time to work a problem, you may have to log back in. If you find yourself spending a lot of time working a problem, you may want to hit, "Submit answer" every few minutes to keep your session active.
- Answers are saved by the system when you hit submit, log out, are timed out, or go to a new problem or lesson using a pull down menu.
- Do not use the, "Back" or "Forward" buttons in your browser. Only use the pull down menus to move between problems or lessons.
- Each answer box is worth equal points in the lesson. If there are 41 boxes in an assignment, spread among 11 questions, then each answer box is worth 10/41 points.

LOGGING OUT:

- There is a Logout button at the bottom of each page. PLEASE make sure to use it when you wish to leave the system. Otherwise, you have to wait 20 minutes to log back in.

Notation help:

- $A = m\angle\alpha$, $B = m\angle\beta$, $C = m\angle\gamma$. $3\cos(\alpha)$ is entered as $3*\cos(A)$.
- The degree symbol is already on the screen; do not try to type it with your answer.
- $\frac{\sqrt{2}}{2}$ is entered as: $\text{sqrt}(2)/2$ and $6\sqrt{2}$ is entered as: $6*\text{sqrt}(2)$
- $\frac{7\pi}{4}$ is entered as: $7* \text{Pi}/4$ and $\frac{\pi}{4}$ is entered as: $\text{Pi}/4$ (The P in Pi has to be capitalized)
- $x = \frac{\pi}{6} + 2\pi n$, $x = \frac{5\pi}{6} + 2\pi n$ is entered as $\text{Pi}/6+2*\text{Pi}*n$, $5*\text{Pi}/6+2*\text{Pi}*n$
- $\tan^{-1}\left(\frac{7}{3}\right)$ is entered as: $\text{arctan}(7/3)$
- $\frac{9}{\sqrt{2}}$ can be entered as $9/\text{sqrt}(2)$ or $9*\text{sqrt}(2)/2$
- $2i$ is entered as: $2*I$ (The I has to be capitalized)
- Undefined, or No Solution, is entered as undefined
- Infinity and negative infinity are entered as: $+\text{inf.}$ and $-\text{inf.}$ (the period is necessary)
- Always use comma to separate multiple answers unless otherwise instructed.
- x^2 is entered as x^2 . $\frac{1}{\sqrt{1+x^2}}$ is entered as $1/\text{sqrt}(1+x^2)$.

Errors: Here are some possible reasons why your answer is incorrect.

- You may simply have the wrong answer.
- You may be answering in degrees when the problem is asking for radians, or visa versa.
- You may have made a rounding error, or rounded too soon.
- Your calculator may be in the wrong mode.
- **In a multi-part problem, you may have carried forward a rounded solution from one part of the problem to the next. Use the entire calculator readout to calculate the next part.**
- The problem is asking for the exact answer and you are entering an approximated answer.