

MATH 1316
TRIGONOMETRY
LAB EXERCISE #1

Instructor's Name: _____

NAME: _____

DATE:

SECTION #: _____

Attach computer printouts to this sheet and submit your assignment.

1a. Use the TI-83 calculator to determine the complement of 150° . (Print)

1b. Use the TI-83 to determine the supplement of 270° . (Print)

1c. Use the TI-83 to calculate $87^\circ 42' 15'' + 124^\circ 15' 42''$. (Print) Write the answer as DMS.

1d. Use the TI-83 to convert 127.74634° to degrees, minutes, seconds. (Print)

1e. Use the TI-83 to convert $117^\circ 15' 32''$ to decimal degrees.

TRIGONOMETRY: LAB #1 (06 Jan 02)

The purpose of this lab is to acquaint you with operation of the calculator and some basic trig terms such as angle complements & supplements.

The on button is on the lower left. You will then need to adjust the contrast. To do this press the 2nd key one time, then press and hold the up arrow key. This will make the screen darker. Repeating the process and pressing the down arrow key does just the opposite.

(1a) Complementary angles add together to give you how many degrees? Use your text's index to look up the term if you do not know. Use the definition to construct your calculation expression on the calculator's home screen, then press enter. Check your answer – does it agree with the definition of complementary angles? If so then plug in the graph link cable at any station, find and double click on the Graph link icon which matches your calculator, then find and click on “Link” (upper left screen), then “get screen”. Use the “clipboard” to transfer the graph to word processing. This will allow you to put all of your graphs together.

(1b) Supplementary angles add together to give how many degrees? How then must you construct your calculation expression on the calculator?

(1c) Now clear the screen. Start by entering the 87, then press the 2nd button, then the yellow “angle” (to the right of the “math”) button. Look at choices 1 through 4, and select the appropriate symbol. Notice that the seconds mark (“) is not listed...it is on the keyboard, in green, above the + button. What key must be pressed first to activate the “ ? Enter to the two angles with the + between them, and press enter. Surprise! The answer is in decimal degrees, which is normal since the calculator wants to work this way. Go back to the “angle” button – do you see a way to change the answer back into DMS? In case of a wacky answer – press the “mode” button – are you in radians or degrees?

(1d) This is an easy conversion using the angle button.

(1e) Remember that your calculator's normal mode of operation is decimal, that is why you do not find the option under the angle button for converting DMS to decimal degrees – it's not needed.