

**MATH 141 HW #3:
CHAPTER 4
FALL 2008**

Write your name and “Math 141” and clearly separate sections! See the syllabus.

Show work where appropriate, and use “good form and procedure,” as in class!

This is due when you take Midterm 3.

Graded out of 15 points.

“*” denotes “See comment below.”

Ask me for answers to “evens” and “My Problems” during our main question session.

I encourage you to circle problems and write comments as you go along.

It is possible that calculators will be forbidden on at least part of the test.

My notes are also fair game for tests. If necessary, read the textbook for more examples.

CHAPTER 4

4.1: 13, 15, 17, 25-39 odd, 43, 47, 49, 53, 55, 63, 71, 79, 83, 87, 116 and then 91

Look at 95.

SKIP AHEAD TO:

4.3: 5, 11, 13, 15, 17, 19, 23, 27, 29, 45, 47*, 53-65 odd, 66*, 71

Look at 1, 3. Quick! What are the missing side lengths?

Note on 47: See if you can deal directly with minutes and seconds on your calculator. You could also convert to decimal degrees.

Answer to 66: About 137.6 feet.

GO BACK TO:

4.2: 1, 17-39 odd, 45, 61

SKIP AHEAD TO:

4.4: 3, 11-23 odd, 29-37 odd, 41, 45-63 odd, 67, 75, 81, 83, 85, 92*, 95, 96

Do My Problem: Use a calculator to find two solutions of each of the following equations; give your answers in degrees ($0^\circ \leq \theta < 360^\circ$) and in radians

($0 \leq \theta < 2\pi$) rounded off to four significant digits:

(1) $\sin \theta = 0.3$, (2) $\sin \theta = -0.3$, (3) $\cos \theta = 0.3$, (4) $\cos \theta = -0.3$,
(5) $\tan \theta = 10$, (6) $\tan \theta = -10$. Answers at the bottom of this page.

Look at 89.

Answer to 92: a) 12 miles, b) 6 miles, c) about 6.9 miles

4.5: 1, 3, 11, 29, 33, 35, 37, 39, 41, 45, 47, 53, 55, 63, 65

Look at 74-80 and 87 (you'll see #87 when you do series in Math 151: Calc II).

4.6: 1-6 all, 7, 9, 19, 21, 25, 49, 50, 75, 83

Look at 77 and 79, and 86 and 87 (the patterns aren't as nice as in 4.5, #87)

4.7: 1-15 odd, 21, 37, 39, 43-67 odd, 96*, 99

Know how to graph the arcsin, arccos, and arctan functions.

On 96: Assume θ is acute and $x > 0$. Answer to b): about 40.6° , about 80.5° .

Look at #14 on p.372. (Nice!)

Look at 94 and 105 (#105 shows an application of the Fundamental Theorem of Calculus to evaluate a definite integral for the purposes of finding an area)

4.8: 1, 3, 5, 11, 15, 17, 19, 21, 29

Look at p.370 on President Garfield's proof of the Pythagorean Theorem!

Answers to My Problem (4.4): (1) 17.46° and 162.5° ; 0.3047 and 2.837
(2) 197.5° and 342.5° ; 3.446 and 5.978
(3) 72.54° and 287.5° ; 1.266 and 5.017
(4) 107.5° and 252.5° ; 1.875 and 4.408
(5) 84.29° and 264.3° ; 1.471 and 4.613
(6) 95.71° and 275.7° ; 1.670 and 4.812