MATH 252 HW #3: SECTIONS 16.3-16.9
FALL 2008

Write your name and class and clearly separate sections! See the syllabus.
Show work where appropriate, and use "good form and procedure," as in class!
(The solutions manual may have insufficient work.)
This is due when you take Quiz 3.
Graded out of 10 points.
"*" denotes "See Hint below."
Read some of the Examples in this chapter for additional assistance.

(My notes are also fair game for tests.)

16.3: 1, 3, 5, 9-19 odd, 25, 29, 33*, 47, 48, 49, 63*

Hint on 33: Use properties of logs. Harmonic functions satisfy Laplace's equation (as stated in the book).

Note on 63: There are infinitely many possible parametrizations.
The one I got was: $x = 1$, $y = 2 + t$, $z = 4 - 4t$.

Look at 55. It's a nice application in computer science!

16.4: 9, 19 (also give an approximation for $f(-2.02, 3.01)$; answer at the bottom)

16.5: 1, 5, 7, 13, 15, 19, 21, 23

16.6: 1, 3, 5, 7, 13, 15, 19, 21, 23, 25, 37
Look at 31, 35-40 (look familiar?), 41.

16.7: 1, 3, 5, 7, 13, 19
Look at 21-24, 29, 30.

16.8: 1, 7, 11, 17

16.9: 1, 3, 5, 11*
Hint on 11: It's easier to let f represent the <u>squared</u> distance.
Look at 14, 19, 20.

Answer to extra part of 16.4, #19: 171.38