

MATH 165B - Introduction to Complex Variables

Homework 6 - Optional



Due Date: Friday, June 5 at 11:59pm

The assignment will be graded but the score will not count towards the final grade

These problems are the combination of the problems at the end of worksheets 11, 12, 13 and 14.

Homework Problems for Sections 105 and 106

- Page 370: #1, #3, #5 and #6
- Star Problems: Page 370: #10
- Let $T(x,y) = T_1 + \frac{T_2 T_1}{b-a}(y-a)$ where T_1 , T_2 , a and b are positive real constants
 - 1. Find the harmonic conjugate of T and the corresponding families of curves F_1 and F_2 defined in Theorem 10.4.
 - 2. Draw a few curves of the families F_1 and F_2 for $b=3, a=1, T_2=20, and <math>T_1=15$

Homework Problems from the handout

- 1. Problems #1, #2, #3 and #8 from the handout.
- 2. Star Problems: Problems #4, #5 and #15 from the handout.

The Star Problems are intended for students who are interested in challenging problems, they can substitute regular problems in the assignment.