

**M417**

Fall 1996

hw15.tex due Dec. 4, 1996

1. Find the fractional linear transformation which carries the points  $1, i, -1$  into the points  $1, i, -i$  respectively.
  - a) What is the image of the circle  $\{|z| = 1\}$ ?
  - b) What is the image of the open disk  $\{|z| < 1\}$ ?
  
2. Find the fractional linear transformation which carries the points  $1, i, -1$  into the points  $1, -i, i$  respectively.
  - a) What is the image of the circle  $\{|z| = 1\}$ ?
  - b) What is the image of the open disk  $\{|z| < 1\}$ ?