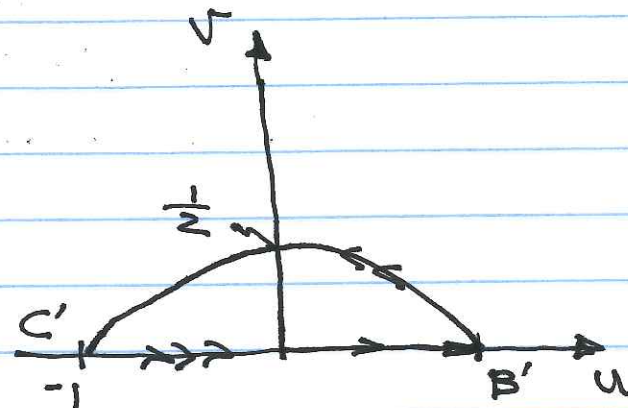
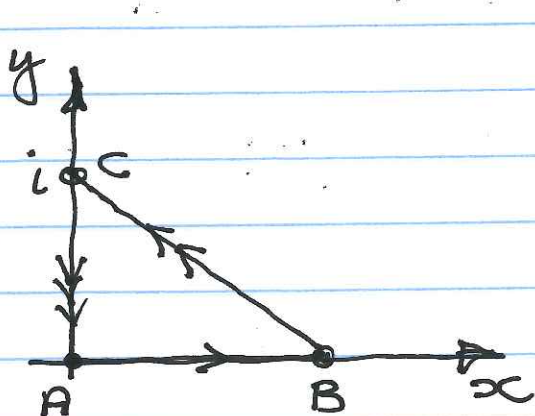


1

Complex Variables - Solns Fall 2015

1



\overrightarrow{AB} $y=0 \therefore u=x^2$ u goes from 0 to 1.

\overrightarrow{BC} $x+y=1 \therefore u=2x-1$ $v=2x(1-x)$
 or $y=1-x$ $=x^2-(1-x)^2$

Eliminating x $u^2 = -2(v - \frac{1}{2})$
 parabola

\overrightarrow{CB} $x=0$

2 CR condition \rightarrow textbook

$|3-4i| = 5$ $\angle = -53^\circ + k360 = -0.93 + k2\pi$

$\ln(3-4i) = \ln 5 + i(\leftarrow)$

$\ln(-4) = \ln 4 + i k\pi$

$2k\pi + \pi$ acceptable