HOMEWORK 6
CALCULUS III
DUE 02-04

(1) (a) Explain why the formula $\theta = \arctan(y/x)$ for the counterclockwise angle θ that the vector $\vec{v} = \langle x, y \rangle$ makes with the positive x-axis (the 'argument') is correct only for $\vec{v}$ in quadrant I or IV.

(b) Give an example of a vector in quadrant II or III, and explain how to find its argument θ. Draw a picture to accompany your explanation.

- **Eleven** book problems: #11.1.4, 15, 17, 20, 30, 47, 48, 53, 54, 101, 105.