Seventh Homework Assignment for Math 232 (D200)

Due: Friday, November 13th.

All section references are to the Lay text.

Problems to hand in:

Section 2.8 problems 6, 18, 24, 32
Section 2.9 problems 4, 8, 10, 26
Section 3.1 problem 4
Final question:
a. Let $z_1 = r_1(\cos(\theta_1) + i \sin(\theta_1))$ and $z_2 = r_2(\cos(\theta_2) + i \sin(\theta_2))$. Use a trigono-metric identity to show that:

$$z_1 z_2 = r_1 r_2 (\cos(\theta_1 + \theta_2) + i \sin(\theta_1 + \theta_2)).$$

Clearly state which identity you use.
b. Find a complex number z such that $z^3 = -1$.

Some other problems you might try:

More true-false: Section 2.8 problems 21 and 22, Section 2.9 problems 17 and 18 and Section 3.1 problems 39 and 40.

Reading for this week:

Appendix B and Sections 5.1 through 5.3.