Physics 230

Homework Set 2

Textbook problems listed below:
1.8.1
1.8.4
1.8.10
1.8.11

1. Calculate sin(4x) and cos(4x) in terms of sin(x) and cos(x). You must use complex numbers formulas for this proof.

2. Calculate all roots of the equations below.

   a. $Z^5 - 1 = 0$
   b. $Z^3 + 1 = 0$
   c. $Z^4 - i = 0$
   d. $Z^4 + 1 = 0$
   e. $Z^4 + 2Z^2 + 2 = 0$

Reading Assignment 2 (Complex Numbers)

List of pages: 53 - 61