P661 Homework # 6 10/07/04

Due Tuesday 10/19/04

Read Chapter 8.

Part 1

(1) Do Problems 1.5 to 1.9.

Part 2:

(2) Bosonize the bc ghost system and verify the background charge (i.e., the coefficient of the second derivative term in $T(z)$ in the linear dilaton CFT) needed to have the same central charge of -26.

Use this bosonized form to verify Eq.(6.3.4). This gives the Jacobian in scattering amplitudes that we have introduced by hand before.

(3) Problem 8.5 (a).

(4) Given Eq.(3.7.20), carry out the field redefinition (3.7.20) to obtain Eq.(3.7.25).