

Introduction to String Theory

Exercises II

Ex. 2.1 Polchinski exercise 2.7 (a)

Ex. 2.2 Noether, Ward & others

In the formalism employed by Polchinski derive

- a) the Noether theorem (see also Polchinski's exercise 2.5),
- b) the Ward identity.

Hint: Polchinski's chapter 2.3 may be helpful.

Ex. 2.3 Polyakov path integral & string scattering amplitudes

Read Polchinski's chapter 3.5 (scan through 3.6 also).

- a) What is a vertex operator?
- b) How are amplitudes computed in string theory?