

Phys 229b, CFT: Problem Set 4

Due: May 8, 2018

Please write up your solutions in L^AT_EX, and submit via email (dsd@caltech.edu). Feel free to use a computer algebra program (e.g. *Mathematica*).

1. Exercise 10.2 in the notes.
 2. Exercise 10.5 in the notes.
 3. Exercise 11.2 in the notes.
 4. Exercise 12.3 in the notes.
 5. Complete the calculation of the differential operator \mathcal{D} in equation 12.27, starting from 12.25. You can optionally use the Mathematica notebook linked on the webpage (or write your own notebook). The notebook assumes familiarity with some advanced Mathematica features. Come see me during office hours if you want an explanation of how it works.
- * *optional, challenging*: Exercise 14.1 in the notes.