

QFT Homework 8 Due 17 Nov 2022

This homework is due to <https://uwcloud.uwinnipeg.ca/s/Xks9XWXz9yo5CpG> by 10:59PM on the due date. Your file(s) must be in PDF format; they may be black-and-white scans or photographs of hardcopies (all converted to PDF), PDF prepared by LaTeX, or PDF prepared with a word processor *using an equation editor*.

Reading Assignment: Srednicki chapters 21, 25, 26.

For a grade Submit your answers for the following questions

1. **Effective Action** *Srednicki 21.1*
2. **Background Fields** *Srednicki 21.3*

Not to be marked Do not submit your answers for the following questions

3. **Quantum Symmetry** *Srednicki 21.2*
4. **Cutting from Unitarity**

Give a heuristic explanation (not rigorous or complete derivation) of equation (25.24) or equivalently (25.23) from unitarity of the S matrix. You may want to follow the discussion in Siegel VII.A.4.