

1. Anomaly cancellation in the MSSM

Show that all ten potential gauge anomalies cancel in the MSSM. You should check $U(1)^3$, $U(1)^2 SU(2)$, \dots , $SU(3)^3$. Some comments:

- To take the contribution of the gauginos into account you might want to use the fact that the contribution of a fermion in a real representation of the gauge group vanishes. See Weinberg QFT vol. II p. 384.
- Note that the cancellation only works because we have two Higgs doublets in the MSSM!