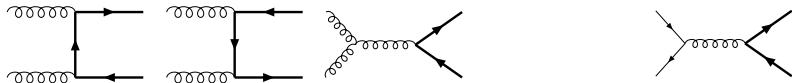


Leading order subprocesses:

1. $gg \rightarrow Q\bar{Q}$
2. $q\bar{q} \rightarrow Q\bar{Q}$ ($q = u, d, s$)



- The gg -channel is dominant at the LHC ($\sim 85\%$ at $\sqrt{S} = 14$ TeV).
- The total production cross section for **heavy quarks** is finite.
The minimum virtuality of the t-channel propagator is m^2 . Sets the scale in α_s .
Perturbation theory should be reliable.
- Note: For $m^2 \rightarrow 0$ total cross section would diverge.