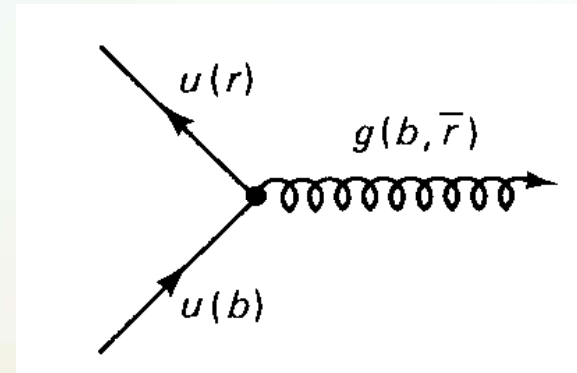
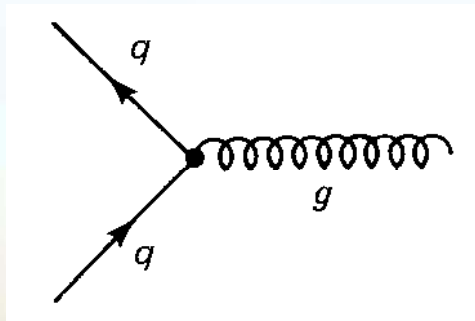


# Strong Interaction

QCD

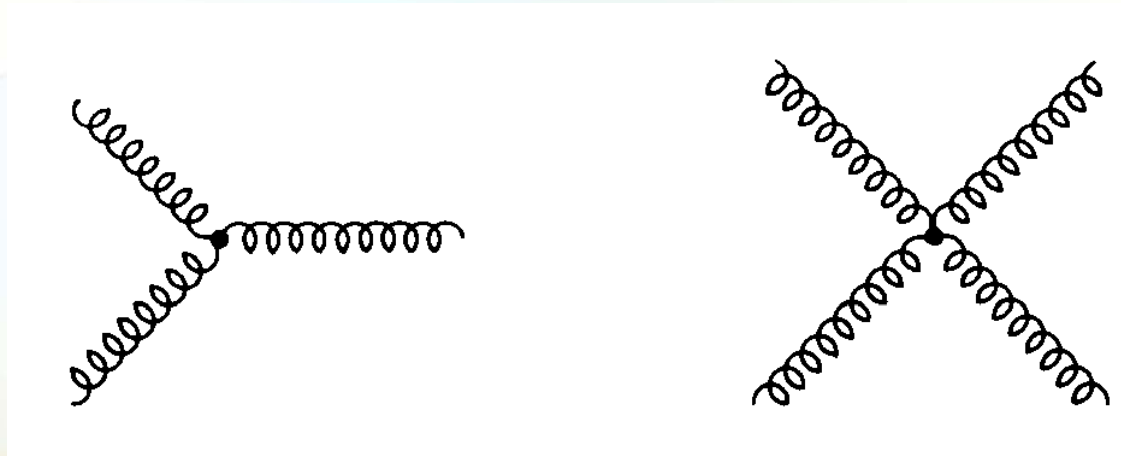
정형

# Basic diagram in QCD



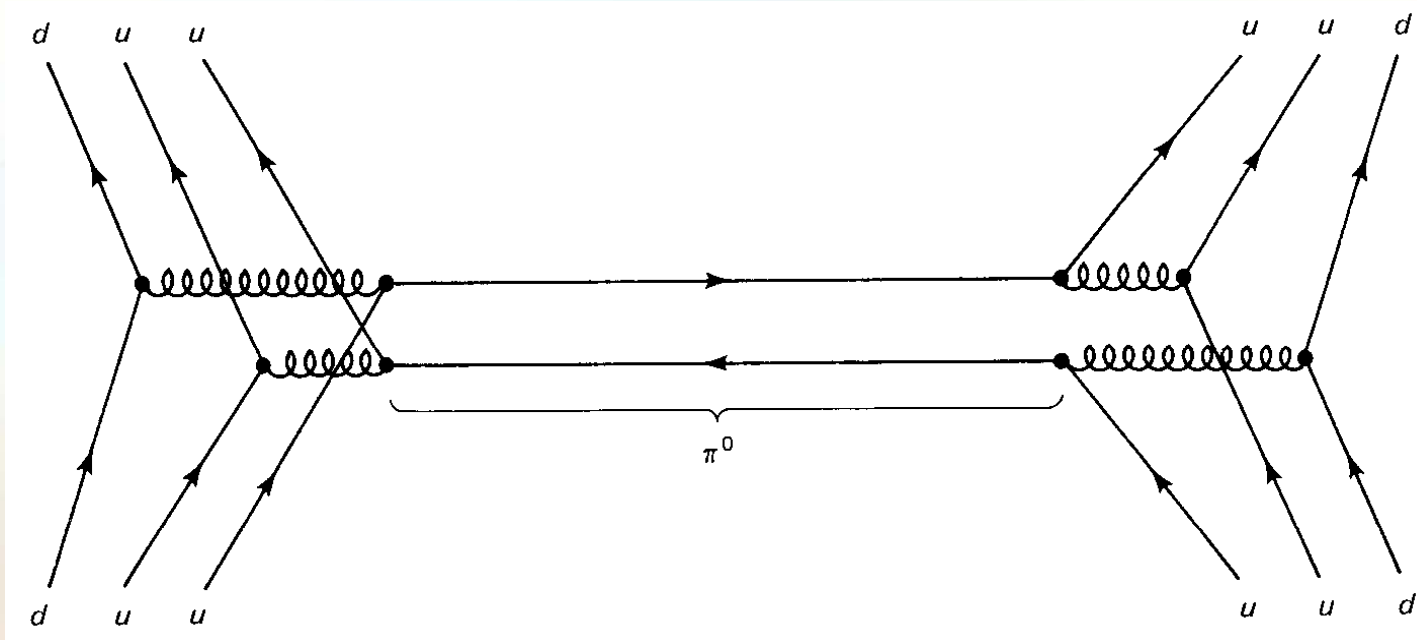
Similar QED, but different!!!

# Gluon Interaction



9 kind of gluon exist. And there is able to interaction.

# Example



Interaction of two positron

# Feynman rule in QCD

Quark has three color. “red”, “green”, “blue”

$$\left\{ \begin{array}{ll} |1\rangle = (r\bar{b} + b\bar{r})/\sqrt{2} & |5\rangle = -i(r\bar{g} - g\bar{r})/\sqrt{2} \\ |2\rangle = -i(r\bar{b} - b\bar{r})/\sqrt{2} & |6\rangle = (b\bar{g} + g\bar{b})/\sqrt{2} \\ |3\rangle = (r\bar{r} - b\bar{b})/\sqrt{2} & |7\rangle = -i(b\bar{g} - g\bar{b})/\sqrt{2} \\ |4\rangle = (r\bar{g} + g\bar{r})/\sqrt{2} & |8\rangle = (r\bar{r} + b\bar{b} - 2g\bar{g})/\sqrt{6} \end{array} \right\}$$

$$|9\rangle = (r\bar{r} + b\bar{b} + g\bar{g})/\sqrt{3}$$