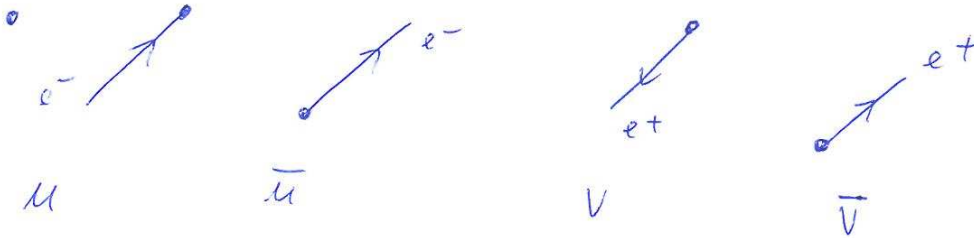


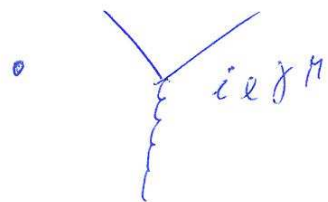
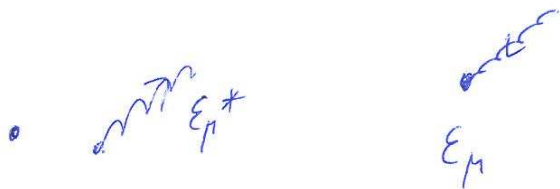
$$\Rightarrow \cancel{S} = -e^2 \cancel{\bar{u}_3 \gamma^\mu u_1} \frac{g_{\mu\nu}}{q^2 + i\epsilon} \cancel{u_4 \gamma^\nu u_2}$$

• overall factor i



•
$$\frac{-ig^{\mu\nu}}{q^2 + i\epsilon}$$

•
$$\frac{i}{p - m}$$



"extra rules":

- $\int \frac{d^4q}{(2\pi)^4}$ for closed loops
- (-1) for closed fermion loops
- (-1) relative factor for graphs that differ by interchange of 2 identical fermion lines
- $\frac{1}{m!}$ for m identical particles in final state (if a σ multiplied by $\frac{1}{m!}$)
 m identical particles, $m!$ ways to count them
but only one is measured