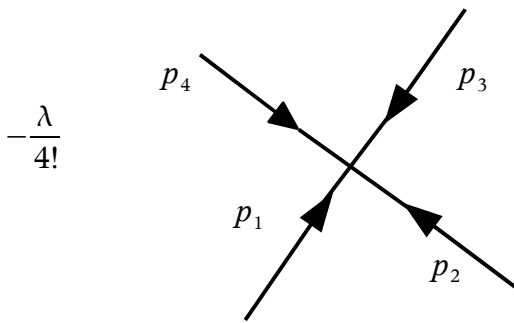


fig. N6



$$\frac{1}{p^2 - m^2 + i\epsilon}$$

fig. N1



$$-\frac{\lambda}{4!}$$

$$p_1 + p_2 + p_3 + p_4 = 0$$

fig. N 2

One loop vertex and three propagators. There are four ways to attach the first leg of vertex to 1, three ways to attach the second leg to 2. Hence the weight is $\frac{1}{4!} \times 4 \times 3 = \frac{1}{2}$ the vertex counts for $-\lambda$.

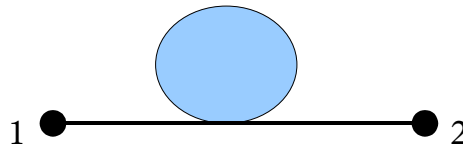


fig. N 3

We need two vertices. Three are four ways to attach the first leg of first vertex to 1, four ways to attach the first leg of the second vertex to 2, three ways to see the second leg of the first vertex to the second, and two ways to sew the third leg of the first vertex to the second. Hence the weight is $\frac{1}{4!} \frac{1}{4!} \times 4 \times 4 \times 3 = \frac{1}{6}$. The strength of this diagram is λ^2 .

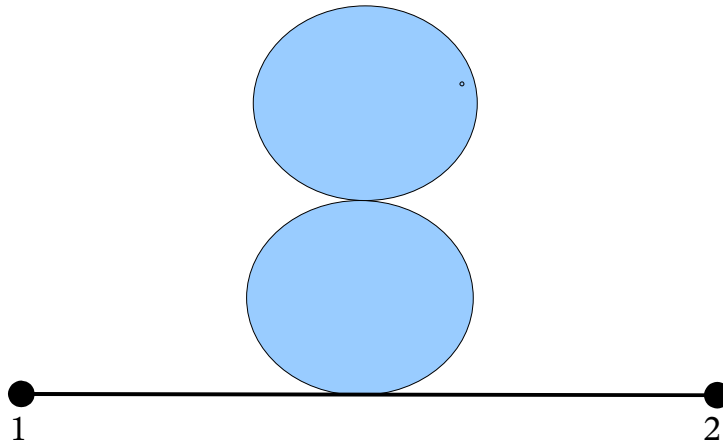


fig. N 4

We need two vertices, four ways to attach the other vertex to 2. This leaves three legs from each vertex free to be tied together one ways. For each vertex there are three ways to close the buckle. Hence the weight is $\frac{1}{4!} \frac{1}{4!} \times 4 \times 4 \times 3 \times 3 = \frac{1}{4}$. The strength of this diagram is λ^2 .

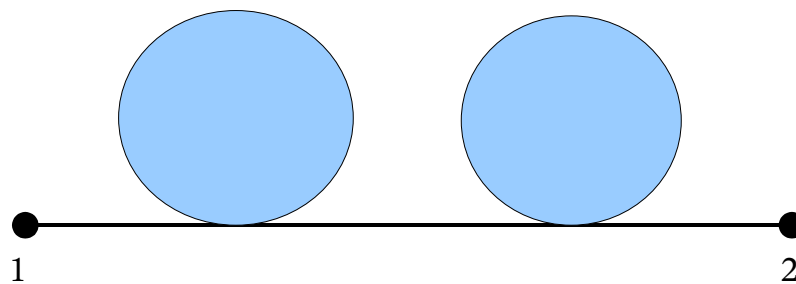


fig. N 5

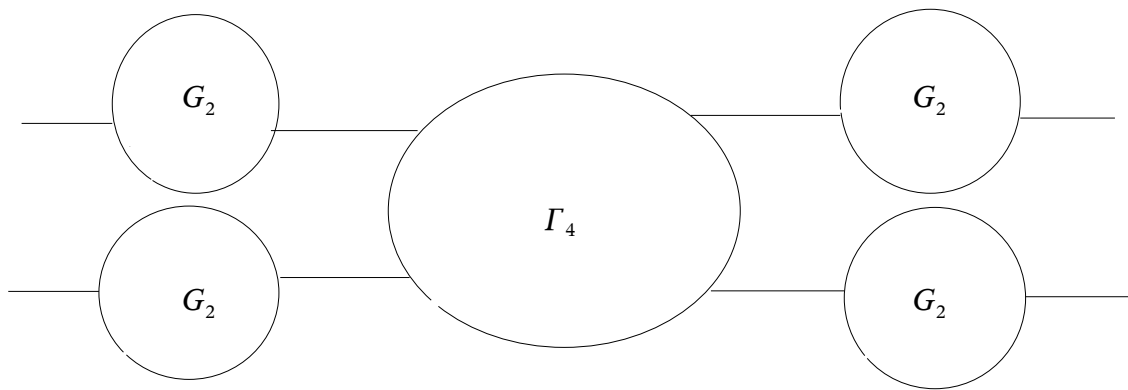
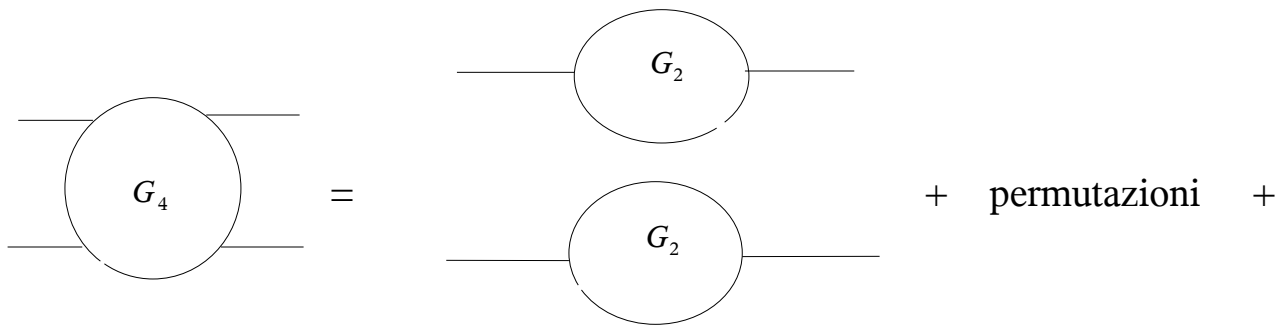


fig. N 8

$$e^+ e^- \longrightarrow \gamma^* \longrightarrow \mu^+ \mu^-$$

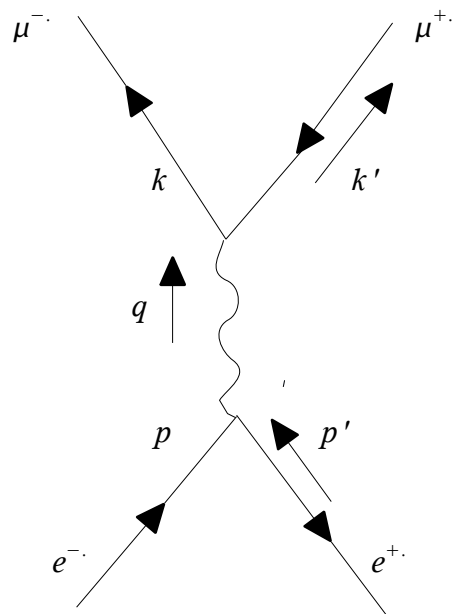


fig. N 9

$$e^- \mu^- \longrightarrow \gamma^* \longrightarrow e^- \mu^-$$

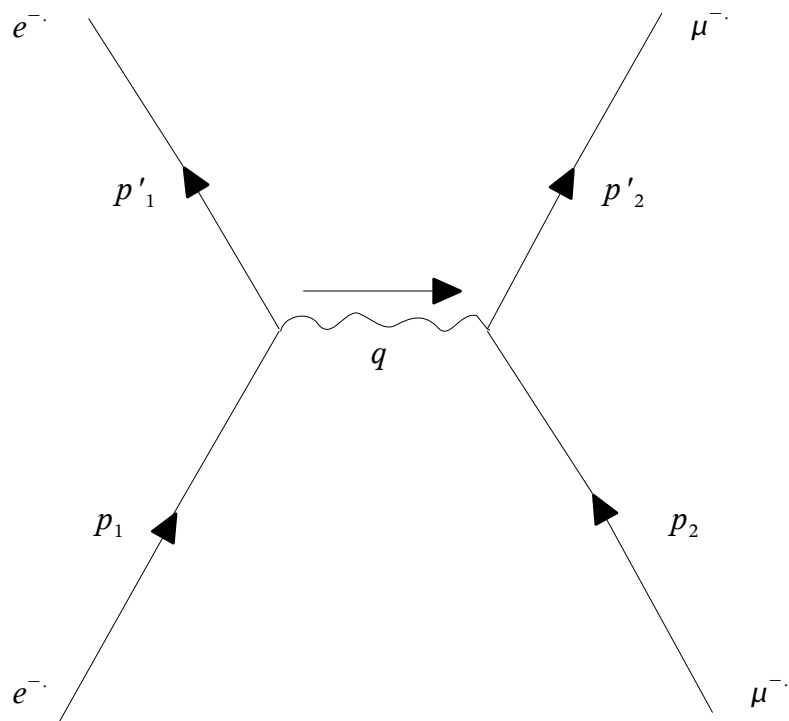
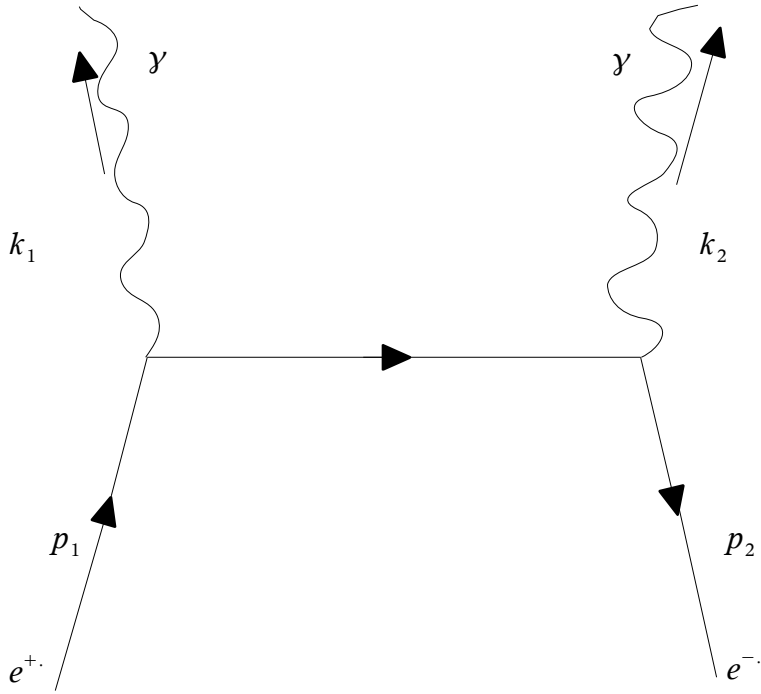


fig. N 10

$$e^+ e^- \longrightarrow 2\gamma$$



+

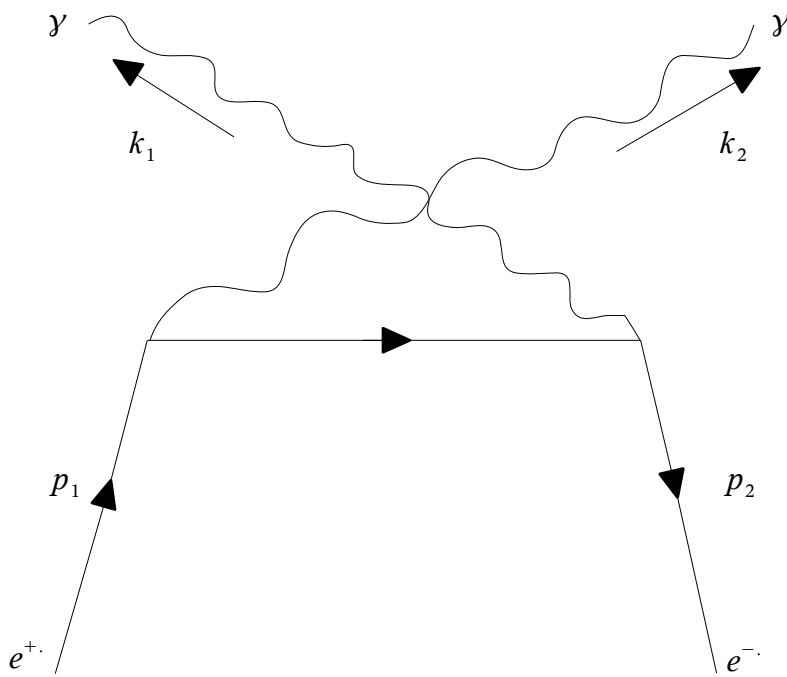


fig. N 11

Yukawa potentials

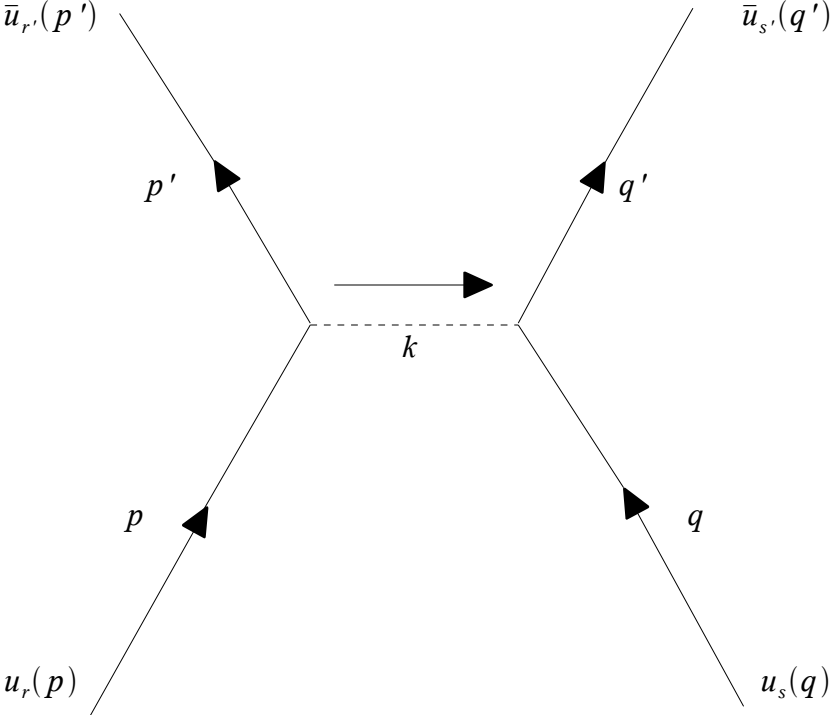
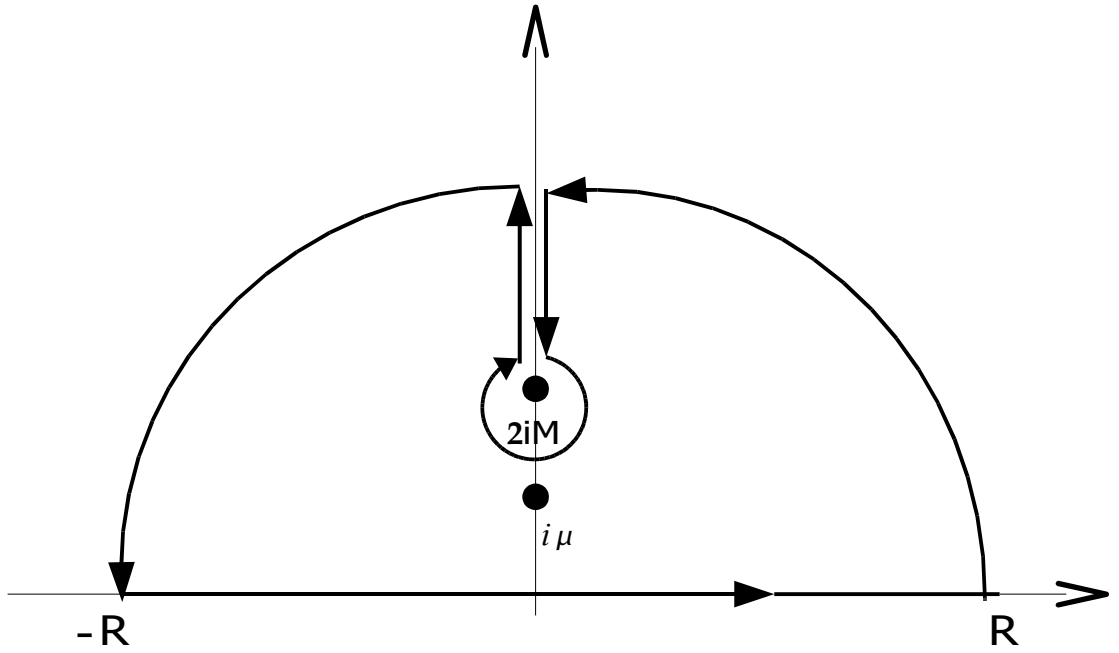
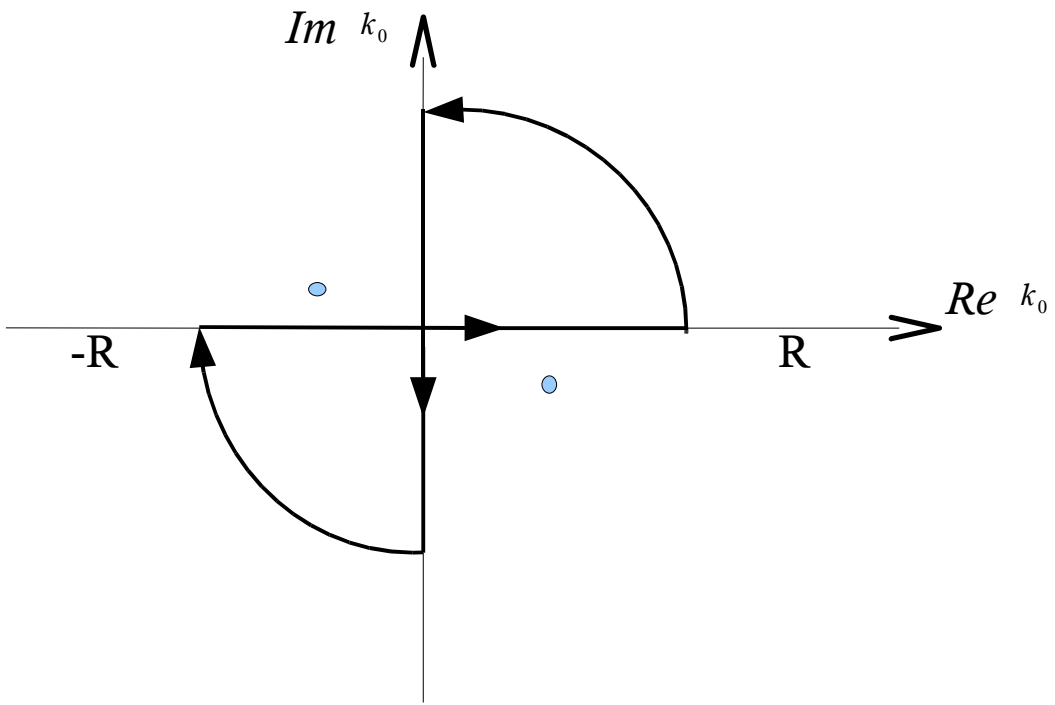


fig. N 7



Oriented contour γ_+

fig. 13



Oriented contour γ_+

fig. 12