$$k_{3}$$

$$p$$

$$k_{1}$$

$$k_{2}$$

$$= (4!)^{2} \times \left(-\frac{i\lambda}{4!}\right)^{2} (2\pi)^{2d} \int \frac{d^{d}p}{(2\pi)^{d}} \frac{i}{-p^{2}-m^{2}+i\epsilon} \delta^{(d)}(k_{1}+k_{2}+k_{3}+p) \delta^{(d)}(k_{4}+k_{5}+k_{6}-p)$$

$$= (-i\lambda)^{2} (2\pi)^{d} \delta^{(d)}(k_{1}+k_{2}+k_{3}+k_{4}+k_{5}+k_{6}) \frac{i}{-(k_{1}+k_{2}+k_{3})^{2}-m^{2}+i\epsilon}$$