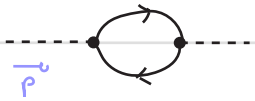
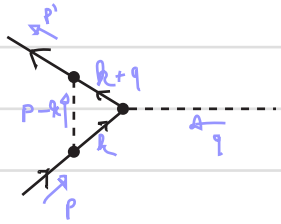
1 Going back to the Lagrangian:

$$\mathcal{L} = \frac{1}{2}(\partial_\mu\phi)^2 - \frac{1}{2}m_\phi^2\phi^2 + \bar{\psi}(i\partial\!\!\!/ - m_e)\psi - ig\,\bar{\psi}\gamma^5\psi\phi +$$
$$+ \frac{1}{2}\delta_3(\partial_\mu\phi)^2 - \frac{1}{2}\delta m_\phi\phi^2 + \bar{\psi}(i\delta_2\partial\!\!\!/ - \delta m_e)\psi - ig\delta_1\bar{\psi}\gamma^5\psi\phi$$

write the expressions for the following 1-loop contributions, Feynman-parametrize and Wick-rotate all expressions (no need to regularize, we will do Dim. Reg. for these later):





scalar

fermion