$$D = \gamma^\mu {}_\mu\partial$$

$$\underset{\sim}{D} = \overset{*}{\gamma}{}^\mu {}_\mu\partial$$

$$\varkappa = 1 \Rightarrow D = \underset{\sim}{D}$$

$$\Gamma D = -D\Gamma$$

$$\Gamma \underset{\sim}{D} = -\underset{\sim}{D}\,\Gamma$$

$$\Gamma \gamma^\mu = -\gamma^\mu\Gamma \Rightarrow \Gamma\underbrace{\gamma^\mu {}_\mu\partial} = -\underbrace{\gamma^\mu {}_\mu\partial}\,\Gamma$$

$$\overset{*}{\gamma}{}^\mu = \pm\gamma^\mu \Rightarrow \Gamma\overset{*}{\gamma}{}^\mu = -\overset{*}{\gamma}{}^\mu\Gamma \Rightarrow \Gamma\underbrace{\overset{*}{\gamma}{}^\mu {}_\mu\partial} = -\underbrace{\overset{*}{\gamma}{}^\mu {}_\mu\partial}\,\Gamma$$

$$\varkappa = i \Rightarrow D \text{ skew-adj}$$

$$\varkappa = 1 \Rightarrow \gamma^0 D \text{ skew-adj } \gamma^0 \underset{\sim}{D}$$

$$\varkappa = i: \overline{\gamma^\mu {}_\mu\partial}^{*} = {}_\mu\overset{*}{\partial}\,\overset{*}{\gamma}{}^\mu = -{}_\mu\partial\,\gamma^\mu = -\gamma^\mu {}_\mu\partial \Leftarrow \gamma^\mu \text{ cst}$$

$$\varkappa = 1: \overline{\gamma^0\gamma^k}^{*} = \overset{*}{\gamma}{}^k\,\overset{*}{\gamma}{}^0 = -\gamma^k\,\gamma^0 = \gamma^0\,\gamma^k$$

$$\overline{\gamma^0\gamma^0}^{*} = \overset{*}{\gamma}{}^0\,\overset{*}{\gamma}{}^o = \gamma^0\,\gamma^0 \Rightarrow$$

$$\overline{\gamma^0\gamma^\mu {}_\mu\partial}^{*} = {}_\mu\overset{*}{\partial}\,\overline{\gamma^0\gamma^\mu}^{*} = -{}_\mu\partial\,\gamma^0\,\gamma^\mu = -\underbrace{\gamma^0\gamma^\mu}\,{}_\mu\partial \Leftarrow \gamma^0\,\gamma^\mu \text{ cst}$$

$$\overline{\gamma^0\overset{*}{\gamma}{}^\mu {}_\mu\partial}^{*} = {}_\mu\overset{*}{\partial}\,\overline{\gamma^0\overset{*}{\gamma}{}^\mu}^{*} = -{}_\mu\partial\,\gamma^0\,\overset{*}{\gamma}{}^\mu = -\underbrace{\gamma^0\overset{*}{\gamma}{}^\mu}\,{}_\mu\partial \Leftarrow \gamma^0\,\overset{*}{\gamma}{}^\mu \text{ cst}$$

$$D^{*} = -D$$

$$\underset{\sim}{D}{}^{*} = -\underset{\sim}{D}$$

$$\underbrace{\gamma^0\bar\gamma^2}\,\underset{\sim}{D} = -D\underbrace{\gamma^0\bar\gamma^0}$$

$$\overset{\sim}{\underset{\sim}{D}} = -D^{\sim}$$

$$\overset{\sim}{\underset{\sim}{D}} = {}^{\sim}\overset{*}{\gamma}{}^\mu {}_\mu\partial = -\gamma^\mu \overset{\sim}{{}_\mu\partial} = -\gamma^\mu {}_\mu\partial^{\sim} = -D^{\sim}$$

$$\underbrace{\gamma^0\bar\gamma^2}\,\underset{\sim}{D}\,\underbrace{\gamma^0\bar\gamma^2} = D$$

$$\overset{\sim}{\underset{\sim}{D}}{}^{\sim} = D$$

$$\tilde{D}{}^{\sim} = \underset{\sim}{D}$$

$$\overset{\sim}{\underset{\sim}{D}}{}^{\sim} = -D^{\sim\sim} = D$$

$$\tilde{D}{}^{\sim} = -{}^{\sim\sim}\underset{\sim}{D} = \underset{\sim}{D}$$