$\text{cmmdc}(54329, 12347) = ?$

$x_{54329} = (1, 0)$

$x_{12347} = (0, 1)$

$$54329 = 12347 \cdot 4 + 4941 \qquad \Rightarrow x_{4941} = x_{54329} - 4 \cdot x_{12347} = (1, -4)$$

$$12347 = 4941 \cdot 2 + 2465 \qquad \Rightarrow x_{2465} = x_{12347} - 2 \cdot x_{4941} = (-2, 9)$$

$$4941 = 2465 \cdot 2 + 11 \qquad \Rightarrow x_{11} = x_{4941} - 2 \cdot x_{2465} = (5, -22)$$

$$2465 = 11 \cdot 224 + 1 \qquad \Rightarrow x_1 = x_{2465} - 224 \cdot x_{11} = (-1122, 4937)$$

$$1 = 54329 \cdot \underline{(-1122)} + 12347 \cdot \underline{4937}$$