

Grupos y anillos, num. 11

$$\text{En } \mathbb{Z}/(6) \text{ resolver: } \left. \begin{array}{l} 2x + 5y = \lambda \\ 5x + 3y = 1 \end{array} \right\} \begin{array}{l} 1) \\ 2) \end{array}$$

Soluc.

$$5^{-1} = 5, \text{ luego } 2) \Rightarrow 5(5x + 3y) = 5 \Leftrightarrow x + 3y = 5$$

$$1) - 2 \times (2) \rightarrow 2x + 5y - 2(x + 3y) = \lambda - 2 \cdot 5$$

$$5y - 6y = \lambda - 4 \Leftrightarrow$$

$$5 \cdot y = \lambda + 2 \Leftrightarrow \boxed{y = 5\lambda + 4}$$

$$x + 3(5\lambda + 4) = 5 \Leftrightarrow$$

$$x + 3\lambda + 0 = 5 \Rightarrow \boxed{x = 5 - 3\lambda = 5 + 3\lambda}$$

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