

Problem 2. Find integers $x, y \in \mathbb{Z}$ such that

(a)

$$234x + 539y = 1.$$

(b)

$$875x + 235y = 10.$$

(Hint: First show that $5 = (875, 235)$ and find $z, w \in \mathbb{Z}$ such that

$$875z + 235w = 5.)$$

(Please show each step of your solution. Thank you.)