

1. Adleman

2. Peter Shor

1. $1 = 13x + 10y$

$$13 = 10 \cdot 1 + 3 \rightarrow 13 + (-10)(1) = 3$$

$$10 = 3 \cdot 3 + 1$$

$$3 = 3 - 1(1)$$

$$1 = 10 - (3 - 1(1))$$

$$1 = 10 - 3 + 1$$

$$1 = (1 \cdot 10) + (-3 \cdot 3)$$

$$1 = (1 \cdot 10) + (-3)(13 + (-10))$$

$$1 = (1 \cdot 10) + -3 \cdot 13 + 3(10)$$

$$1 = 4 \cdot 10 + (-3) \cdot 13$$

$$x = -3, y = 4$$

give the cashier 4-10 dollar coins

and they give bank 3-13 dollar coins