

# Secure Overt PIN Codes

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Using military grade cryptography for securing your PIN codes, such as on your personal credit card.

# *Choosing your key*

Pick a secret number that is:

1. Easy for you to remember
2. Hard for anyone to guess
3. Preferably not used anywhere
4. Preferably not related to you or your family (i.e., date of birth, names, pets,...)

We'll Use 2580 In Our Example

# Encrypting

Simple calculation

|         |      |
|---------|------|
| Protect | 1234 |
| Secret  | 2580 |

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Subtract

1 is smaller than 2 so we add 10 to it before subtracting

$$1-2 = 11-2 = 9$$

$$2-5 = 12-5 = 7$$

$$3-8 = 13-8 = 5$$

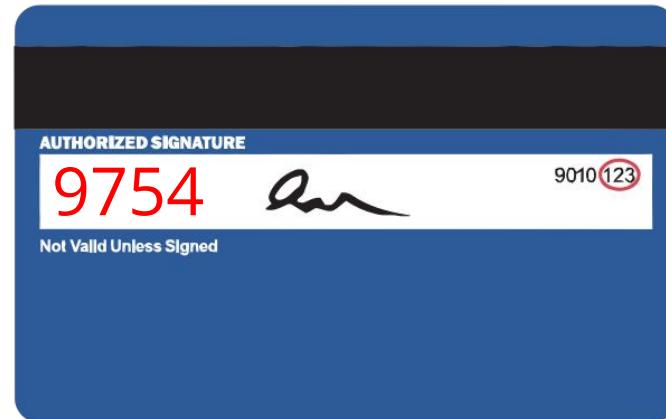
$$4-0 = 4$$

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Result (Encrypted)      9754

# Use

We can openly write down the PIN, for example on our credit card and as long as no one knows the “protect” or “secret” values no one can decrypt our code. In the next page we’ll see how we can easily decode it “on-the-fly” whenever we need it.



# Decrypting

Simple calculation

|           |      |
|-----------|------|
| Unprotect | 9754 |
| Secret    | 2580 |

Add

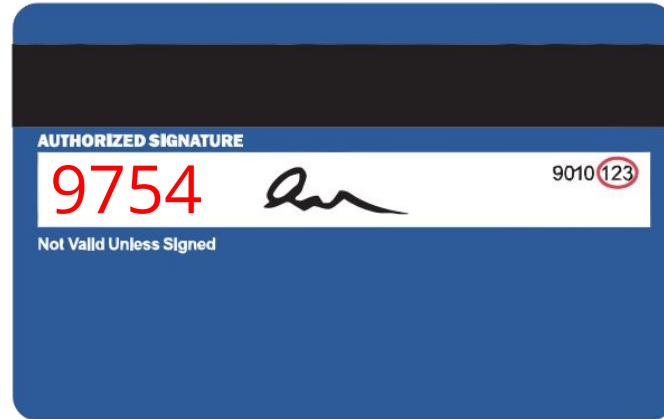
If the result is larger than 9 (i.e., two digits), ignore the left digit

$$9+2 = 11 = 1$$

$$7+5 = 12 = 2$$

$$5+8 = 13 = 3$$

$$4+0 = 4$$



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|                    |      |
|--------------------|------|
| Result (Decrypted) | 1234 |
|--------------------|------|