

# Security: Polybius cipher

The Polybius cipher is an encryption method that uses a numerical or letter matrix to assign letters to pairs of digits. By default, a 5×5 matrix is used, on which the letters of the alphabet are placed, with one letter (usually 'J') being omitted or combined with another letter (e.g. 'I').

## Polybius matrix

For this example, we will use the following matrix (alphabet without 'J'):

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	A	B	C	D	E
<b>2</b>	F	G	H	I/J	K
<b>3</b>	L	M	N	O	P
<b>4</b>	Q	R	S	T	U
<b>5</b>	V	W	X	Y	Z

## Name encryption

First name: Kacper

- K → 25
- A → 11
- C → 13
- P → 35
- E → 15
- R → 42

Name: Ostrowski

- O → 34
- S → 43
- T → 44
- R → 42
- O → 34
- W → 52
- S → 43
- K → 25
- I → 24

Summary

## Polybius matrix:

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>1</b>	A	B	C	D	E
<b>2</b>	F	G	H	I/J	K
<b>3</b>	L	M	N	O	P
<b>4</b>	Q	R	S	T	U
<b>5</b>	V	W	X	Y	Z

- KACPER = 25 11 13 35 15 42
- OSTROWSKI = 34 43 44 42 34 52 43 25 24