

NUMBERED KEY (2.5 - 3 times the length of the extended key)

This is a substitution cipher.

To construct a numbered key cipher start with a key word, phrase, sentence, or paragraph, extend it by appending any missing letters in alphabetical order, then number the resulting extended key, perhaps starting in the middle of the key and wrapping around to the beginning. Each plaintext letter is then encrypted by one of the numbers in the key.

Key: "I like ciphers."

Extended key: i l i k e c i p h e r s a b d f g j m n o q t u v w x y z

Shifted extended key: m n o q t u v w x y z i l i k e c i p h e r s a b d f g j

Numbered key:

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21
m n o q t u v w x y z i l i k e c i p h e r
22 23 24 25 26 27 28
s a b d f g j

Encryption table:

a 23	e 15, 20	i 11, 13, 17	m 0	q 3	u 5	y 9
b 24	f 26	j 28	n 1	r 21	v 6	z 10
c 16	g 27	k 14	o 2	s 22	w 7	
d 25	h 19	l 12	p 18	t 4	x 8	

Pt: The road to success is always under construction.

Worksheet:

04 19 20 21 02 23 25 04 02 22 05 16 16 15 22 22 11 22 23 12 07 23
t h e r o a d t o s u c c e s s i s a l w a
09 22 05 01 25 20 21 16 02 01 22 04 21 05 16 04 17 02 01
y s u n d e r c o n s t r u c t i o n

CT:

04 19 20 21 02 23 25 04 02 22 05 16 16 15 22 22 11 22 23 12 07 23
09 22 05 01 25 20 21 16 02 01 22 04 21 05 16 04 17 02 01.