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Simple hill cypher

Nowadays people like keeping things secret and secure, this is most commonly done with cryptography. This is not only used for emails, and instant messages, it can also be used for good old fashion letters in which the people communicating have a legend to decrypt the message sent. Encryption is the transformation of data into some unreadable form. Decryption is the undoing of the encryption to be able to read the message in some simple form. Normally when you encrypt something, you would most commonly have "units" substituting your letter or sentences. The units could be in one's, two's or even three's. There are various ways of substitution cyphering, one way (the most common way), would be to use ROT13, an alphabet rotated over 13 steps.

Simple Hill Cypher, is a method to solve and encrypt a message. The method consists of using substitution. Eg:

A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
P	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**.**	**?**	**!**	*****
16	17	18	19	20	21	22	23	24	25	26	27	28	29	0

I	*****	**L**	**i**	**k**	**e**	*****	**m**	**a**	**t**	**h**	**!**
9	0	12	9	11	5	0	13	1	20	8	29

Next we would convert the message into a 3X1 matrix.

9	9	0	20
0	11	13	8
12	5	1	21

We would then multiply this matrix with the encoding matrix to incode it:

1	0	0
0	2	0
0	0	2

This would be your encrypted message: [M] [E] = encrypted matrix

9	**9**	**0**	**20**
0	**22**	**26**	**16**
24	**10**	**2**	**58**

The receiver would use his mathematical skills to solve the equation, than the answer.

[E] X[M] = encrypted message

Find [M]

[E]-1[E] X [M]=[E]-1X encrypted message

[M] =[E]-1X encrypted message=

1	**0**	**0**			**9**	**9**	**0**	**20**
0	**½**	**0**		**X**	**0**	**22**	**26**	**16**
0	**0**	**½**			**24**	**10**	**2**	**58**

=	**9**	**9**	**0**	**20**
	0	**11**	**13**	**8**
	12	**5**	**1**	**29**

the answer:

9	**0**	**12**	**9**	**11**	**5**	**0**	**13**	**1**	**20**	**8**	**29**
I	*	L	i	k	e	*	m	a	t	h	!

As we can see Cryptography is a great method for secrecy and is rather fun to do. Even though the new programs developed to crack encryptions, cryptography still remains one of the safest encryption methods. Certain progr ams are reliable but they can easily be cheated by expert crackers, due to there repetitiveness, unlike a human which can think of a new encryption every time.

Finally, you have learnt a simple form of encryption, have fun experimenting with friends I hope it will serve you in your future.