Data sheet **Codes**

Here is an encrypted message:

2	4	0	1
t	m	a	e
e	f	r	o
i	t	u	r

key: 32^2

To decode the message,

1 Evaluate the key: $32^2 = 32 \times 32 = 1024$

2 Notice that the digits at the top of the code are 1, 0, 2, 4 but in a different order.

3 Put these digits in the correct order (1024), along with the columns of letters below them:

4 Read the message: ‘eat more fruit’.

1	0	2	4
e	a	t	m
o	r	e	f
r	u	i	t

Questions **Codes**

1

Decode this message:

9	1	6	3
o	d	n	o
a	t	w	s
w	l	o	l
s	p	p	i

key: 37[2]

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2

Here is a message before encryption

1	0	2	4
r	i	d	e
a	b	i	k
e	t	o	w
o	r	k	□

key 32[2]

Write the message in its encrypted form in this grid.

2	4	0	1

3

Why would an encryption based upon a key of 38^2 not be a good idea?

4

If you do not know the key to the code, you can try to decipher the message by simply trying to rearrange the columns of letters until a message appears.

Here are two different ways the message 'eat more fruit' could be encrypted:

7	5	1	8	2	4
o	r	t	m	a	e
i	t	r	u	f	e

key: 75^3

A

2	4	0	1
t	m	a	e
e	f	r	o
i	t	u	r

key: 32^2

B

Which of these two encryptions would be easier to decipher by just rearranging the columns until a message appeared?

A / B

Give a reason for your answer.
