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с) Шифр простой замены:

Определение:



Шифр простой замены

$$C = \langle S(\mathbb{Z}_m), \mathbb{Z}_m, \mathbb{Z}_m, E, D \rangle$$

$$E_K(X) = K(X)$$

$$D_K(Y) = K^{-1}(Y)$$

Текст:

hereuponlegrandarosewithagraveandstatelairandbroughtmethebeetlefromaglass
caseinwhichitwasencloseditwasabeautifulscarabaeusandatthattimeunknowntonat
uralistsofcourseagreatprizeinascientificpointofviewthereweretworoundblacks
potsnearoneextremityofthebackandalongoneneartheotherthescaleswereexceeding
lyhardandglossywithalltheappearanceofburnishedgoldtheweightoftheinsectwasv
eryremarkableandtakingallthingsintoconsiderationicouldhardlyblamejupiterfo
rhisopinionrespectingit

Ключ:

|ezopmarbyvgnlcwqsxfuitkhjd

Результат зашифрования:

bmxiqwcnmrxecpexwfmkyuberxetmecpfueumnjeyxecpzxwirlubmzmnmunmaxwlerneff
oefmyckbyobyukefmcnwfmppyukefezmeiuyainfoexezemifecpeuubeuuylmicgcwkcwceu
ixenyfufwaowixfmerxmeuqxydmycefoymcuyayoqwycuwatymkubmxmkmxmukwxwicpzneogf
qwufcmexwcmhuxmlyujwaubmzeogecpenwcrwcmcmexubmwubmxubmfoenmfkmxmmhommpycr
njbexpecprnwffjkyubennubmeqqmexecomwazixcyfbmprwnpubmkmyrbuwaubmycfmoukeft
mxjxmlexgeznmecpuegycrennubycrfycuwowcfypmxeywcyowinpbexpnjznelmviqumxaw
xbyfwqycywcxmfqtmouycryu

Результат расшифрования:

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е) Шифр Виженера:

Определение:



Шифр Виженера

$A = \mathbb{Z}_m, \mathcal{K} = A^* \setminus \{\varepsilon\}, \gamma = KK \dots K$ (конкатенация нужного числа экземпляров),

$$E_{\gamma_i}(x_i) = x_i + \gamma_i,$$

$$D_{\gamma_i}(y_i) = x_i - \gamma_i$$

А = 0	К = 11	Х = 22
Б = 1	Л = 12	Ц = 23
В = 2	М = 13	Ч = 24
Г = 3	Н = 14	Ш = 25
Д = 4	О = 15	Щ = 26

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Ключ:

thekey

Результат зашифрования:

alvoynhupokptuhkvmllassxftnvkzctuhcxymlpiegkhrnfphbkrxkxalofcxapojphteqpylz
gkwcbuarmaapxgeqxugvsqxkmdaylhfoesmpjepqvhvkfyxbwkrbtaxrermppqoyldusgrrhued
yptsmcxqhmgypplleqvctatbmxxprkwablrdmdbhjtymlmvjfmcpalovcplvoxuhyserbusemoq
ivxcrctysxicqavoqgmfspxfxiemoygkevsllzvrortyxrimmoibxfxzgkpcldibicqjiohggn
pilykkexheevwccubalkpjmoiktngxhvkraxvjlypgpwribzvpnfxdiskfmvjdlcbuwogrphwf
ipryiwepdhfvigykxkoggnevpraprqwggasmllphovympsxmahbpnlykkpifjtittynbaibjm
komcsnbumyrpxztogrbusx|

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