

## Example Ciphertext and $\phi$ -statistics for Subtexts

Consider the following ciphertext, which is known to be enciphered polyalphabetically with a number of alphabets between 40 and 50 :

```

HSKUS PMFHD UJJIX MSPTP OIPCI WKZVU
YPPNE USAIG BOOGA OPGPR HBOUC SHPVG
HQXZS ACKRK VBGHM VSFYR YTKHK VWZXV
LIJHW ARLKF IJSLT MHKAH QTUVT XSMEC
FCSKT GOOYB XZVLI JRYAC DWEJM SCAFP
IEAXO KAQDW EXPYP QHDNO JIXNZ JGNUD
OARFU ERJOY BDOKE IKDUV TDVEV LETDO
AFROU NYNBD VQOBE GGSHQ HXOPU ZCOCU
KKZLT PHKRT CCOAS BZUGB UBBUN OVTPO
VMIZD EPQFV KZ
    
```

Assuming the 50 alphabets were used, the message would be rewritten as

	1		2		3		4			
	01234	56789	01234	56789	01234	56789	01234	56789		
1	HSKUS	PMFHD	UJJIX	MSPTP	OIPCI	WKZVU	YPPNE	USAIG	BOOGA	OPGPR
2	HBOUC	SHPVG	HQXZS	ACKRK	VBGHM	VSFRY	YTKHK	VWZXV	LIJHW	ARLKF
3	IJSLT	MHKAH	QTUVT	XSMEC	FCSKT	GOOYB	XZVLI	JRYAC	DWEJM	SCAFP
4	IEAXO	KAQDW	EXPYP	QHDNO	JIXNZ	JGNUD	OARFU	ERJOY	BDOKE	IKDUV
5	TDVEV	LETDO	AFROU	NYNBD	VQOBE	GGSHQ	HXOPU	ZCOCU	KKZLT	PHKRT
6	CCOAS	BZUGB	UBBUN	OVTPO	VMIZD	EPQFV	KZ			
$\phi$	40222	02020	20000	02002	62000	22000	22002	02000	20200	00000

Assuming the 43 alphabets were used, the message would be rewritten as

	1		2		3		4		
	01234	56789	01234	56789	01234	56789	01234	56789	
1	HSKUS	PMFHD	UJJIX	MSPTP	OIPCI	WKZVU	YPPNE	USAIG	BOO
2	GAOPG	PRHBO	UCSHP	VGHQX	ZSACK	RKVBG	HMVSF	RYYTK	HKV
3	WZXVL	IJHWA	RLKFI	JSLTM	HKAHQ	TUVTX	SMECF	CSKTG	OOY
4	BXZVL	IJRYA	CDWEJ	MSCAF	PIEAX	OKAQD	WEXPY	PQHDN	OJI
5	XNZJG	NUDOA	RFUER	JOYBD	OKEIK	DUVTD	VEVLE	TDOAF	ROU
6	NYNBD	VQOBE	GGSHQ	HXOPU	ZCOCU	KKZLT	PHKRT	CCOAS	BZU
7	GBUBB	UNOVT	POVMI	ZDEPQ	FVKZ				
$\phi$					00000	01000			
	20244	42426	40242	46040	44462	04822	04204	22242	462