Q1:

a)

tafoerhbmkoeadaaaaieomnsdetctnasnbdopeaplhttaigseiaobevnkuiskdreetatawbonadntadxtpueshtodujwmoootuananooerawirhihdeooriiseehhnpenastetioahtaiieeueatoleoortyoevniteitntkealerlaenoaseailouivfptolvvcohreonothhithbcsechianhteeetrswrooewrtegehvsievseccaaunarnodnxterqumotntrnrutreosuksrtaswesaslrngesaaruocenannaaepispdhnietpaohgeotwbitchcsuhwngentahteleeuirtmeuviwosiwtanrdhasialypeiuarivtotcrezasacheerharntonesoptdiwteetpnnssetifxsetfesdeastsawqenoastneneddrooipgedelfrpacwlifibrliihtocengaswflhltpfcetiatbeowtheldouwoaootlostrettsteseaneiaemosvbreiovionhfmfenefoxcnahdtopoeehotxnlrnrrpgnogitrhihararetoeiraoeehccaornvusdihotdoyocsaosarfouurstymatymnvweslmmaharpohssoltmnenfhnoefeorvrnfaorgeodeadrtcetrareetnnntrrrhpvrutuhwucigpslnhwhecuisespsatpauwntcrrieshtseiareepoirieemheeoeiteplseentshleciktoheueheeeunneoareldtuntanteipdaueeastypetrberutbtadohomwctoogttpnselllbmyianvdacueaignmolnwatnfrhenhheloreigbstoneiretcleafisneronirosyteaonennemetnnlocehrrosrzctctamdnelndhrwtaflepeahnftetitsnenopwdhuwhnetkhpliuncktuhaycbneanfohrrhddittdtoinolooefaahtnpottlatoodhatlrodnolrfoooaotssertustifhhadhasrvorhorznneiseuqwcueruiioeotgalcaogseohntsgfonhaheansesadriarsefepetihhnonrtncrekhnunaydcteonrefotiwbgpcvourtoehtmyhtedeelcsuspinelkeutmeaestetigspiswgetcoaunorusotetohvhspiudecenyetnaeislppeitieemiogeiedasnsktrslohisegeaeeeceehaollnsdhnrtnrrsogwuemoessawdahtedeltehfofnntisrnetlusonnahtdhrahwcaolenxbehfmtypepitobecin

b)

Frequencies

a 111b 17c 42d 44e 192f 29g 23h 83i 81j 1k 11l 47m 23n 111o 125p 39q 3r 89s 86t 136u 46v 19w 31x 6y 13z 3Plot:

Comment:

Because using Columnar transposition cipher doesn’t change the frequency of each letter, the two charms are the same.

Q2:

a)

xliwlehsasjxliqssrwaitxegvswwxlikpsfijvsqlsrkosrkxsxlixibewterlerhpiewevevierrypevwspevigpmtwifikerqsrhecqsvrmrkmrewmeerhxvezivwihxlitegmjmgxliwyrettievihewexlmrvmrkfilmrhxliqssrxstistpimrerevvsatexlepsrkxligirxivsjxlixvegoalmglfikermrwsyxlivrglmreliezcgpsyhwsfwgyvihxlizmiamrlsrkosrkfyxviwmhirxwsjxsocserhsxlivgmxmiwaiviefpixskixewtigxegypevzmiajsvefsyxjsyvqmryxiwevsyrhwizirxlmvxcxaseqqsrhecwmbxlmvxcxastqixwyrhecizirxwaiviliphexwglsspwerhqywiyqwmrneteralmpiqercqsvitistpixssomrxliyrywyepewxvsrsqmgepizirxexlsqisvsrwxviixgsvrivwejxivalmddmrkegvswwxlitegmjmgxliwlehsaiqivkihszivrsvxlivrgepmjsvrmeerhwsyxlivrsviksralivixlsywerhwsjtistpiexxirhihtevxmiwxsaexglxliizirxxlijmvwxxsettievmrxliyrmxihwxexiwwmrgirmrixiirrmrixcjsyvibtivxwaevrihxlexlstijypzmiaivwwlsyphrsxtiivytexxliwocamxlsyxwtigmepzmiamrkiuymtqirxwmrgipssomrkexxliwyramxlxlireoihicigergeywifpmrhriwwhiviovepwxsretvsjiwwmsreptlsxskvetlivwemhliywiheaiphmrkjmpxivxsgetxyviehmvigxzmiasjigpmtwimrxlijssxlmppwefszisvszmppigepmjsvrmeliwlevihxlitlsxssrgrrmvitsvxrsxmrkxlivexlivwpmqwaexlsjxlikpsfialsgsyphwiixlimqtegxsjxliigpmtwivepwxsrwemhliaerxihxsirefpixliviwxsjxliasvphxswiilsagpievmxpssoihxsxlswisjywalsaivijsvxyrexiirsyklxswiimxxliwpmzivsjwyrwlmrixlirxvezipihwsyxliewxegvswwgirxveprizehewsyxlivryxelerhrsvxlivrevmdsreerhxlirriaqibmgsmxtewwihszivepfyuyivuyiriaqibmgsefsyxwizirxlmvxcjsyvtqrmrixlmvxcjsyvtqixfijsvitixivmrksyxiewxsjpyffsgoxibeweggsvhmrkxsreweb)

Frequencies

a 31b 6c 13d 3e 111f 17g 42h 44i 192j 29k 23l 83m 81n 1o 11p 47q 23r 111s 125t 39u 3v 89w 86x 136y 46z 19Plot: