Assignment 7

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Cryptanalyze the following ciphertext that was enciphered with a Vigenère Cipher:

DYCRKS SDFPDY HZOCYQ KOVYFB AXQJYJ QQKSWN YYHLOA NYCXGO VFVPIX BLVPSC ESSCYC STTJKE ITGGLO ZLHFCF CKCGPO DVPADG FGX90N FDPCJU VBUHFY EZBTWC YCMGRM CJSRGC TIKDIY ABOORV LWXPJO URWXTA BJRATP JKUMGI CGNCCR KCKCZL 1989HI CCOFDW BGJOXP TMGSDY YKBBYL VEJGOL BVLSYC JNVQXZ BWBSPT XRKYEY CTPUZF BRTGLS FNTGSV KGYCWC JKJZDQ OFNICA XOKOUY UKOFUV LHMSAX JKDGGL OIFTLO ANYGHU WYBVEG XHACKF PMVACZ LKXBLS FLETJW NKFTPO QPFPJG SLRZAP EFMDYJ TLGHOF NAXHGL ICTWHZ OUMVLK ADYMJM HZSEIX GUGPKF TASSVK FDYHZO ZPDYTK ZIGCZO UMFPSB BYDFAD GFGXKF TFOBYI GIRCXV RZGTRG YUJTLO JOVGIA SJMIYO RCJRRT TTBZOI CSBHSB PNGHPD ODUXMV ZORJIA MWHRKE ESKYWR WXPJOV BUXKSX UDPKPW DNCTGV WLVJXX JWCKFP MDWYGJ TAONOE MLZCFO KMDYOJ GZRWVF GCJZGX SVSEEL AWURTY CBBUBV YHXOVY XQGBGC YWADGU WXZRPE RACVYH XDSBKG RNZSBC WSHKFD YCVXBW BRRXHB KYERWX DGNTYH MVWVRG SIOJDZ AJEOJC TMGGCF DYCCXK JYKRLX WDOIND HRDOYW QKWVUE MLGOKK IMIMZW YIYGHH LSVNDH QGXIMC LCJSXG CTZHEI NDLSAX TPDLGA XXYATP JKUMGP WLRRQI TBVKIB EHCVVV UWBQZR RQPGCF CYCSWW FQTMPM VSNSCT GHGZIM KBRWKX SXWSVY XDDKOT VZLSPC EKEGCA OOKZGL ACKOYS HUOFNN YHTZDO IEXVHG NFEH

Solved: THECR EATOR OFTHE LABRA DOODL ECROS SBREE DHASS AIDHE INADV ERTEN TLYUN LEASH EDAFR ANKEN STEIN SMONS TERWA LLYCO NRONW HOWOR KEDFO RGUID EDOGS VICTO RIAIN AUSTR ALIAW HENHE BREDT HEFIR STLAB RADOR POODL ECROS SINSP OKEOF HISRE GRETS ATHAV INGBE GUNAT RENDF ORDES IGNER BREED SONAN ABCPO DCAST IOPEN EDAPA NDORA SBOXA NDREL EASED AFRAN KENST EINSM ONSTE RHESA IDHIS BIGRE GRETI STHAT HISIN VENTI ONPAV EDTHE WAYFO RUNET HICAL RUTHL ESSPE OPLET OBREE DTHED OGSWI THOUT THINK INGOF THEHE ALTHO FTHEI ROFFS PRING ACCOR DINGT OCONR ONTHE MAJOR ITYOF LABRA DOODL ESARE EITHE RCRAZ YORHA VEANH EREDI TARYP ROBLE MWITH HEALT HYEXA MPLES OFTHE BREED FEWAN DFARB ETWEE NHEBE LIEVE STHAT PEOPL EHAVE NOWGO NETOO FARWI THCRO SSBRE EDING WHICH CANIN CREAS EADOG SRISK OFCON GENIT ALDIS EASEP ARTIC ULARL YDOWN THEGE NERAT IONSO NTHEP ODCAS THELA IDPAR TICUL ARSCO RNONT HENEW ROTTW EILER POODL EHYBR IDKNO WNASA ROTTL EORAR OTTIE POOCO NRONS ORIGI NALPU RPOSE INCRO SSING ALABR ADORW ITHAS TANDA RDPOO DLEWH ICHHA SANON SHEDD INGCO ATHAD BEENT OPROV IDEAG UIDED OGFOR ABLIN DWOMA NINHA WAIIW HOSEH USBAN DWASA LLERG ICTOD OGS

The keyword for this Vigenère Cipher is kryptos. I was able to solve this cipher by first going into Vbreaker and running the “get N-graphs”. Once we started to determine the frequent trigraphs, we then started to find common factors between the distance of the repeated trigraphs. Once we had enough data, I was able to find the common factor of 7. I checked this by running the shifter in Vbreaker confirming that the keyword we were looking for was 7 letters long. With this information I was able to strip the alphabet in Vbreaker and figure out the shift by looking for the most frequent letter (E) and finding the shift for A, the same way we would do when looking at frequencies for the Caesar cipher. Once figuring out each stripped letter I was able to solve the cipher with the keyword kryptos in Vbreaker giving me the plaintext.

