ARRL / Signal Corps random letter & number code practice groups:

```
0KICQ AEI0U MVHVD JEHDY ZMNZB
24680 13579 APLKM MCNCB NDBGY
CKTOG CJRNO NDHBH PAOKU KDIOE
AXBTR YOUMK JTIOE MDHNH CVQAR

03759 CEMID MNLFG UEYTA NASTF
CWXCK JXEFY YOUMK QYEUR CFGIL
DKAKX EFMEY VOIUM QWZXN CADXA
WQYFZ 49285 12709 MNOPA TTLOR

OMIWG JNABD 97201 KQZAX MAIDP
HSPCQ JBCYD EFXNK LARDO 76321
XGLDT PGZUN LCKQH MQECV 70365
80701 CTILL 0CYAA BEXZB OHWIM

RKMOZ THQVI ZLJBI ALCRJ VTNEE
EKJCD HMOUS 84707 DLZIK HELKF
DJHNG TVCPT KDKNG PHVTX 47382
HHHGJ CPTKO FHFUX HIMAD MRFXE

LDOSJ 20184 NTVMG CPNZI 40367
12310 VNFBH WOHZR JBOAH OBRDK
BAYQT DIEUY IPAQZ GYEVZ PVFKQ
QNBAV JCUWH FNZQJ ARJZU RBEFP

25894 83746 PGMAE DXAQN KDIEY
JXHGQ LKDOP 10273 11902 MDIDH
98015 WEQFQ DXNZE 06143 09165
MBUDF 17863 98234 CPTOK QZASU
```

Common words / fragments for high speed review:

```
THE ONS ITS THAT WHICH
ING ESS WHO HAVE THEIR
AND AVE HIM WITH THERE
ION PER MAY FROM WOULD

ENT BUT OUT WERE THESE
HER NOT OUR THEY SHALL
TER DAY ANT WILL GREAT
COM INE NOW THIS OTHER

ALL ONE YET WHAT ABOUT
CON SUB TWO MORE THOSE
MAN WAS OWN UPON COULD
EST YOU OLD LIKE FIRST

FOR HIS NEW SUCH MIGHT
ATE HER CAN INTO AFTER
ERS SHE ANY TIME TRANS
NCE HAS TED VERY RADIO
```

J random code practice, FO=0

```
fphcb rzlfg doukf ksjir uxtwy kqtjl qgoui rjgba llmen pgqir sjnec
mgofw yxxzo fymrf dmrrc mtwlj djeay zteal xdnbi ephcb pjpto halxb
xhkqv xtuic mtbpl fpwju xuipo sjeph czdrh pepdm gqtcm rlvph jksje
ayzte alxdl nayzv suvnt duipm rgosw lfgdm ealou vfqgq gbyzt cmtbp
lfnip kfosu ipkda ykqvy ksjdh osuvj uvean cohjm enswy xcbie pfmrl
vntdw wlire alqvx rgqgq thohp gbtie alxbx hmenr poshq tjenr gbfph
czdtt hqtje ntuxb ztean jvxtw wwwlf pwlkd wwlkf kshsh ofdmr pqiru
xrico uvfqg osjci lqvxt uiecz bfpfo hhftz bfnri rxxzo hksjb vyksj
bvwym rhpgd jcmgd houir jiruv daykq ticmr lxbxf ymrhr sjlsu ksuvp
hjmgd oukdw wjuxs wjmgb yksho ukfpy xalme pbyks hqgof dohly mrgqi
epfoh hhftz bdbbk fphcz bfnri pjptm rgbdz nephl ayxmg qgouv wldsj
cmgbt ieczd tvxkf nipkf osuir alqgo swlfe pgouv wjryz ymgqi eanen
rrecb mrfdm rpoux kdzcz epwli pouvu xzohk qthxk qgqic bzwlf nipkf
osuir yxksw yment duiry xkqic osjng qgqgb yzvsu vphjk shqic bbmrf
dmtdu iryxm gqgos hqtho fbanb gofdm rposj epfoh hfrlv ghjmg douip
ouxir hsjen tuxbx hksjd hqgof ballm gbtkq gdrfb allme npgqg byxhk
qvvda aykfo swyzq tcmrn jtjng qieal qvvdc oukfi cbqtm rirxv juxuk
dwwjw jkshq iepfo ftbpj rjipg bvyks jdhqg ofdmt fkqtm ripld zczcz
epyxa lmenn uicbq tohcb rzlds houip tmrgd rhpen piean entfk sjgba
llouv fqgqi pgdho ukfpy xancm tfksh uvuxx alouv fqiec zyxxz qvqip
jrjir uxrgo swldq tiecz drfba nbien twjth xmgou iczen ipmri cosjl
qgouk dzczc bshsh ofbal lmgdj cmepb yksjc mgdjc mennu icbsh shqth
```

N random code practice, FO = 0 (also G, sent as single chars)

```
lp7s1 hp1vw 3eukf asj8r kxjmy 6slp7 iy6qk xjs3g x3ew5 v268r 4pnqi
ym07y 49tz0 7ecdx j8t7y ozwl9 tzum0 5facd dddry 4p7s1 11hv4 7cddx
pn6s1 xj6au 4p11h 5f8bw 3u4rq kf4p7 sl9dd bwl3y mgfu4 9dx5h v2ozu
m05fa cdddx jm05v igxp9 zm07s 3y6as 1vw3y 6s3uk hbq26 s305f u4p11
h5z07 cbaum 07cv2 q28ry 689tj 6acdb wn6sj 2ohvi gfu2o j8ry4 pr49d
xp9z2 8r47e wns1x 3ymiw 5zgdb cdbaa cddxp nm0pt rqkzw 5f49j 8tlp7
sl9t5 zw5f4 9zgdx 5fact 51xjm iyoh5 f8rkz 28rkf as3kz gxj8t r68rk
x3eeu khbq2 qtfo1 ns1xj 6aasl tlprk xxhpl tl9jo h9tz0 n689d ry689
driec ddbct zeect j6qkx j8rkh v2q28 bau49 ddxp7 ecddr 4p7y6 qigx5
hviw3 eukz2 8bw3e cviwn q2oj6 q05fo js3ew lnq2o jmigx johba s3ymy
4prkx xxhpl t5hbw lp7sl tl9jo 11hvo j8t51 305hb qkz26 q2q07 s1foz
eecdb aasl9 tln05 z07cb aum0n 07iy6 as1vg v2q07 slnkf u26qi ew30p
t7ecb cdxj8 trq0n 0pr4r kf8r4 rq07c tz0n6 sl9zm iymyo hvoh5 z07cb
aum0n kzmym ym0p9 zm0nk zmiee u4pn6 q26s3 05vig x5hv2 ojmyo hbcdx
j89zm 0nkz2 6q2qk zw5zg x3gdr igxj8 trqkf 4prkx xh9ex 5hviw 3eu4r
q0nkx 3kf49 zgdxp n689t jmigx 3gx3e cdbq2 89dx3 gx3ew 5v26s 30pn6
s1hv2 6acba u2ozg fu49t 5lpn6 qiewn s1hvi eukfu 47cvo joh9d bw3uk
z28bc v2ojm y4prk hp111 xj8bc dry68 9tjmi gxj89 facvo jo1hp r4r4r
kfojs 3ew5f au47c v47s1 hp1fo j6qkh voj89 ddbw5 view3 0p9fa sjs3g
x3ukh bq268 bctj6 q05fo jsj28 9fas3 07ctj s3ukh bqiec v49tz gv2o1
1xj8r kx3y6 as1f8 baasl 9dx3g dry49 zw5l9 z26aa u4rkz 07s3e eu4p7
iy6q0 pr4r4 7s3kz gx3gx 3ectz eewln q2oze ectze ew5fa u47s3 kzw5z
```

O random code practice, FO = 0

```
note:   =    dahdidididah
        /    dahdididahdit
        *    didididahdidah    SK
        +    didahdididit      AS
        -    didahdidahdit     AR
```

```
?p7k1 *htno 3/ukf =sj8r cxbey iwh*j eu2=o hj478 9zas1 fey8r -*n2=
=/,.2 od?z, .6,pt .kxza sjwl9 lrmy4 prug* 5d?jq 4p7k1 ?xdzw 7g*5*
l+iwl xba/q 091?1 5+c+0 nugvu gz4p7 kxtpx ns53= /-rq0 5*1xh 7y8rm
y4pru g*5d9 3y4pv as1t1 biw3c +u26, tno3= =ozec tvqey 474pr q091?
15.w3 -vmyi w3-r6 my4.y i09ln 2689+ 0j=o3 2oh72 kbymg vsjq4 p305*
1t1bm cbgze -rwlx +u6mg *vcxn wh7/u g*5*l +mctx vugvg *z4lf ,p?p7
kxtt* vg*z4 ljs5* prugd hlxbe u2k15 +cbkb mcbkf =sfgv ct.kx vy8rc
x+yie ctvqe ugz0i rwlxb a/ukx p?p34 ppl9x p?lf- *d?z, +i09h .yi09
h.u6, pxnwl riawl n2=oh j8rct r6my4 7/q05 *5*l. 6,pxr -*jia aas1x
h72o3 /ukbm c+0nq 472oz my8n2 =s5+g vozas 5zmy8 n6mct .oh.e c+u6q
4p34p ppl9x p99b8 ?p7kx p?lf- ?xdzs f,p95 vcxh. iw3u6 qeukb ,tj8r
iawh7 /ukxt tdfs5 .w3-v myiw7 0jeu2 6,tnk feukb ,p7w7 /u6qi e-vct
xzecb ,pt.k xvukf s1n8n ,+cbg vukb8 ?z,+i wh?3q eu6q0 9+k15 .w3-v
myiw7 w3qie ymct1 biw7w 3qeyi e-*n6 qey47 4pvas 1xh7y 8n6q0 9b,pt
.k1bi w7w3u 6qeug vg*vc t78?j mct.k xvugz 4p34p pl5*1 xh72o 3/ugv
ukfoh fgz4l js5*l +i09l n6mct 789za wh7a/ ,tpt7 89zas 1fey4 74l+i
wltr6 qe-vm ymgz- rq05d hh*n6 qie-r wltr= /ukf6 8rozs f-*d9 +0nuk
bmc+4 7y8n6 q4p34 l91?x hj8nw h.yi0 9ln6m ct.k1 f=ozs f-?11 n8n8n
,+gvo zas1b 268ro zw7k1 *htj8 n2=od zsf,t pxns1 fie-v ct1f= sj478
9zect vqey8 nwln2 =s5+g vo32k 1f=sf kb8?v ozect vqiec +od?z -v/-?
xhj8r cx+u2 6,tj4 7/ukx tpt78 ?jq4l jwhh? 3u6m2 68n,. w3c+y ie-*j
eu2=s 1n8n8 rsfgv ct789 zawlr ias5z my8ri awlri as1b2 68rsf gvg*v
```

```
ohjme  nswyx  cbiep  fmrlv  ntdww  lirea  lqvxr  gqgqt  hohpg  btiea  lxbxh
menrp  oshqt  jenrg  bfphc  zdtth  qtjen  tuxbz  teanj  vxtww  wwlfp  wlkdw
wlkfk  shsho  fdmrp  qirux  ricou  vfqgo  sjczl  qvxtu  ieczb  fpfoh  hftzb
fnrir  xxzoh  ksjbv  yksjb  vwymr  hpgdj  cmgdh  ouirj  iruvd  aykqt  icmrl
xbxfy  mrhrs  jlsuk  suvph  jmgdo  ukdww  juxsw  jmgby  kshou  kfpyx  almep
byksh  qgofd  ohlym  rgqie  pfohh  hftzb  dbbkf  phczb  fnrip  jptmr  gbdzn
ephla  yxmgq  gouvw  ldsjc  mgbti  eczdt  vxkfn  ipkfo  suira  lqgos  wlfep
gouvw  jryzy  mgqie  anenr  recbm  rfdmr  pouxk  dzcze  pwlip  ouvux  zohkq
thxkq  gqicb  zwlfn  ipkfo  suiry  xkswy  mentd  uiryx  kqico  sjngq  gqgby
zvsuv  phjks  hqicb  bmrfd  mtdui  ryxmg  qgosh  qthof  banbg  ofdmr  posje
pfohh  frlvp  hjmgd  ouipo  uxirh  sjent  uxbxh  ksjdh  qgofb  allmg  btkqg
drfba  llmen  pgqgb  yxhkq  vvdaa  ykfos  wyzqt  cmrnj  tjngq  iealq  vvdco
ukfic  bqtmr  irxvj  uxukd  wwjwj  kshqi  epfof  tbpjr  jipgb  vyksj  dhqgo
fdmtf  kqtmr  ipldz  czcze  pyxal  mennu  icbqt  ohcbr  zldsh  ouipt  mrgdr
hpenp  ieane  ntfks  jgbal  louvf  qgqip  gdhou  kfnyx  ancmt  fkshu  vuxxa
louvf  qiecz  yxxzq  vqipj  rjiru  xrgos  wldqt  ieczd  rfban  bient  wjthx
mgoui  czeni  pmric  osjlq  goukd  zczcb  shsho  fball  mgdjc  mepby  ksjcm
gdjcm  ennui  cbshs  hqthq  tjent  wjvxt  wyksh  pdmgq  vqipj  rhsje  phcbr
xvjux  ukdww  juvgo  fwyxx  zofww  jrhsj  enrir  xxzqt  ealvp  hjmgd  oukfk
sjipe  nnuic  zenkf  gdmec  bgofb  allmg  bvyme  phlaa  lsuic  ohfrl  vnrrc
ofmrn  jtjlq  gouip  tmtwl  jdhou  kdbqt  ofmtb  pjrji  pgdho  ukdbs  hsjcz
nephl  ymtwy  kqthx  kqiec  mtdwy  zohkq  vvfqi  cmrgb  dbzwj  rhshq  tjeph
```

N random code practice, FO = 1 (also G, sent as single chars)

```
ohvig  fu2oj  8ry4p  r49dx  p9z28  r47ew  ns1x3  ymiw5  zgdbc  dbaac  ddxpn
m0ptr  qkzw5  f49j8  tlp7s  l9t5z  w5f49  zgdx5  fact5  1xjmi  yoh5f  8rkz2
8rkfa  s3kzg  xj8tr  68rkx  3eeuk  hbq2q  kfo1n  s1xj6  aaslt  lprkx  xhplt
l9joh  9tz0n  689dr  y689d  riecd  dbctz  eectj  6qkxj  8rkhv  2q28b  au49d
dxp7e  cddr4  p7y6q  igx5h  viw3e  ukz28  bw3ec  viwnq  2oj6q  05foj  s3ewl
nq2oj  migxj  ohbas  3ymy4  prkxx  xhplt  5hbwl  p7slt  l9jo1  1hvoj  8t513
05hbq  kz26q  2q07s  1foze  ecdba  asl9t  ln05z  07cba  um0n0  7iy6a  s1vgv
2q07s  lnkfu  26qie  w30pt  7ecbc  dxj8t  rq0n0  pr4rk  f8r4r  q07ct  z0n6s
l9zmi  ymyoh  voh5z  07cba  um0nk  zmymy  m0p9z  m0nkz  mieeu  4pn6q  26s30
5vigx  5hv2o  jmyoh  bcdxj  89zm0  nkz26  q2qkz  w5zgx  3gdri  gxj8t  rqkf4
prkxx  h9dx5  hviw3  eu4rq  0nkx3  kf49z  gdxpn  689tj  migx3  gx3ec  dbq28
9dx3g  x3ew5  v26s3  0pn6s  1hv26  acbau  2ozgf  u49t5  lpn6q  iewns  1hvie
ukfu4  7cvoj  oh9db  w3ukz  28bcv  2ojmy  4prkh  p111x  j8bcd  ry689  tjmig
xj89f  acvoj  o1hpr  4r4rk  fojs3  ew5fa  u47cv  47s1h  p1foj  6qkhv  oj89d
dbw5v  iew30  p9fas  js3gx  3ukhb  q268b  ctj6q  05foj  sm289  fas30  7ctjs
3ukhb  qiecv  49tzg  v2o11  xj8rk  x3y6a  s1f8b  aasl9  dx3gd  ry49z  w5l9z
26aau  4rkz0  7s3ee  u4p7i  y6q0p  r4r47  s3kzg  x3gx3  ectze  ewlnq  2ozee
ctzee  w5fau  47s3k  zw5zw  5f49z  w51xj  my68t  l3ymg  v2o11  x3kf4  p7s1h
9dbw3  ukz28  bwnm0  7y49t  z07yo  1x3kf  49joh  9tzgf  acdx5  hviw3  eukfa
sj8bw  5fau4  rkzgv  w3y68  rigx3  gx3ec  drym0  5hbq0  7y6au  kxh9d  xpt7y
4r49t  5lp7i  y6qkh  vozwl  9tj6q  0p7cv  4r4p1  11xj8  bctj6  q0p7s  3kfo1
305hb  asjmy  6sl9z  mieu2  89z2o  z0n6s  1hbqi  yoj8t  5hvo1  x3kzw  5f4p7
```

O random code practice, FO = 1

```
note:   =     dahdidididah
        /     dahdididahdit
        *     didididahdidah      SK
        +     didahdididit        AS
        -     didahdidahdit       AR
```

```
oh72k bymgv sjq4p 305*1 t1bmc bgze- rwlx+ u6mg* vcxnw h7/ug *5*l+
mctxv ugvg* z4lf, p?p7k xtt*v g*z4l js5*p rugdh lxbeu 2k15+ cbkbm
cbkf= sfgvc t.kxv y8rcx +yiec tvqeu gz05r wlxba /ukxp ?p34p pl9xp
?lf-* d?z,+ i09h. yi09h .u6,p xnwlr iawln 2=ohj 8rctr 6my47 /q05*
5*l.6 ,pxr- *jiaa as1xh 72o3/ ukbmc +0nq4 72ozm y8n2= s5+gv ozas5
zmy8n 6mct. oh.ec +u6q4 p34pp pl9xp 99b8? p7kxp ?lf-? xdzsf ,p95v
cxh.i w3u6q eukb, tj8ri awh7/ ukxtt dfs5. w3-vm yiw70 jeu26,tnkf
eukb, p7w7/ u6qie -vctx zecb, pt.kx vukfs 1n8n, +cbgv ukb8? z,+iw
h?3qe u6q09 +k15. w3-vm yiw7w 3qiey mct1b iw7w3 qeyie -*n6q ey474
pvas1 xh7y8 n6q09 b,pt. k1biw 7w3u6 qeugv g*vct 78?jm ct.kx vugz4
p34pp l5*1x h72o3 /ugvu kfohf gz4lj s5*l+ i09ln 6mct7 89zaw h7a/,
tpt78 9zas1 fey47 4l+iw ltr6q e-vmy mgz-r q05dh h*n6q ie-rw ltr=/
ukf68 rozsf -*d9+ 0nukb mc+47 y8n6q 4p34l 91?xh j8nwh .yi09 ln6mc
t.k1f =ozsf -?11n 8n8n, +gvoz as1b2 68roz w7k1* htj8n 2=odz sf,tp
xns1f ie-vc t1f=s j4789 zectv qem8n wln2= s5+gv o32k1 f=sfk b8?vo
zectv qiec+ od?z- v/-?x hj8rc x+u26 ,tj47 /ukxt pt78? jq4lj whh?3
u6m26 8n,.w 3c+yi e-*je u2=s1 n8n8r sfgvc t789z awlri as5zm y8ria
wlria s1b26 8rsfg vg*vg *z4lj whlxb eyi05 53=/- v/-?x hfgz4 p7k1*
d9+0n ukbmc +0j/, .2od? z,.2k xhfgz 4lf-* d?z-r ug*1x h72o3 /ukf=
sj8ns 1b268 n,.0n o3==s jmct7 89zaw h.ymc xh.i0 jia/q 4pl5* 1txza
w305d hh*je u2=od zsjwl 9ln2= s1roz w3091 ?xhj8 nwln2 =s1rs fgz05
vcxh. ecbey iwh?3 qeym2 k1bmg z,+iw ltvqi asf,p 99+kx hfgvg *z4p7
```

J random code practice, FO = 2

```
mgbyk  shouk  fpyxa  lmepb  ykshq  gofdo  hlymr  gqiep  fohhh  ftzbd  bbkfp
hczbf  nripj  ptmrg  bdzne  phlay  xmgqg  ouvwl  dsjcm  gbtie  czdtv  xkfni
pkfos  uiral  qgosw  lfepg  ouvwj  ryzym  gqiea  nenrr  ecbmr  fdmrp  ouxkd
zczep  wlipo  uvuxz  ohkqt  hxkqg  qicbz  wlfni  pkfos  uiryx  kswym  entdu
iryxk  qicos  jngqg  qgbyz  vsuvp  hjksh  qicbb  mrfdm  tduir  yxmgq  goshq
thofb  anbgo  fdmrp  osjep  fohhf  rlvph  jmgdo  uipou  xirhs  jentu  xbxhk
sjdhq  gofba  llmgb  tkqgd  rfbal  lmenp  gqgby  xhkqv  vdaay  kfosw  yzqtc
mrnjt  jngqi  ealqv  vdcou  kficb  qtmri  rxvju  xukdw  wjwjk  shqie  pfoft
bpjrj  ipgbv  yksjd  hqgof  dmtfk  qtmri  pldzc  zczep  yxalm  ennui  cbqto
hcbrz  ldsho  uiptm  rgdrh  penpi  eanen  tfksj  gball  ouvfq  gqipg  dhouk
fpyxa  ncmtf  kshuv  uxxal  ouvfq  ieczy  xxzqv  qipjr  jirux  rgosw  ldqti
eczdr  fbanb  ientw  jthxm  gouic  zenip  mrico  sjlqg  oukdz  czcbs  hshof
ballm  gdjcm  epbyk  sjcmg  djcme  nnuic  bshsh  qthqt  jentw  jvxtw  ykshp
dmgqv  qipjr  hsjep  hcbrx  vjuxu  kdwwj  uvgof  wyxxz  ofwwj  rhsje  nrirx
xzqte  alvph  jmgdo  ukfks  jipen  nuicz  enkfg  dmecb  gofea  llmgb  vymep
hlaal  suico  hfrlv  nrrco  fmrnj  tjlqg  ouipt  mtwlj  dhouk  dbqto  fmtbp
jrjip  gdhou  kdbsh  sjczn  ephly  mtwyk  qthxk  qiecm  tdwyz  ohkqv  vfqic
mrgbd  bzwjr  hshqt  jephc  zbfph  alxdn  zuirh  uxkfn  kdqti  ecbrx  vlkdw
yxcbi  cbbmt  vvuvj  wlaal  sukqi  pjrjg  ballo  sjlqi  cmepb  ymepg  ouxkf
pyzof  wwldz  enipk  fqgqg  dofxu  irecz  wlfpw  lkfks  huvux  zqtea  nljbv
wymrf  byxhk  sjbti  ecbpj  ptohc  zbfph  alvnt  duipk  dcmea  lmgbv  wwwjr
jirsj  necou  ipqip  gdhqi  czlqt  jlqgq  iczls  jbtkq  ipldz  epyzo  hkqtj
```

```
iwnq2 oj6q0 5fojs 3ewln q2ojm igxjo hbas3 ymy4p rkxxx hplt5 hbwlp
7sltl 9jo11 hvoj8 t5130 5hbqk z26q2 q07s1 fozee cdbaa sl9tl n05z0
7cbau m0n07 iy6as 1vgv2 q07sl nkfu2 6qiew 30pt7 ecbcd xj8tr q0n0p
r4rkf 8r4rq 07ctz 0n6sl 9zmiy myohv oh5z0 7cbau m0nkz mymym 0p9zm
0nkzm ieeu4 pn6q2 6s305 vigx5 hv2oj myohb cdxj8 9zm0n kz26q 2qkzw
5zgx3 gdrig xj8tr qkf4p rkxxh 9dx5h viw3e u4rq0 nkx3k f49zg dxpn6
89tjm igx3g x3ecd bq289 dx3gx 3ew5v 26s30 pn6s1 hv26a cbau2 ozgfu
49t5l pn6qi ewns1 hvieu kfu47 cvojo h9dbw 3ukz2 8bcv2 ojmy4 prkhp
111xj 8bcdr y689t jmigx j89fa cvojo 1hpr4 r4rkf ojs3e w5fau 47cv4
7s1hp 1foj6 qkhvo j89dd bw5vi ew30p 9fasj s3gx3 ukhbq 268bc tj6q0
5fojs j289f as307 ctjs3 ukhbq iecv4 9tzgv 2o11x j8rkx 3y6as 1f8ba
asl9d x3gdr y49zw 5l9z2 6aau4 rkz07 s3eeu 4p7iy 6q0pr 4r47s 3kzgx
3gx3e ctzee wlnq2 ozeec tzeew 5fau4 7s3kz w5zw5 f49zw 51xjm y68tl
3ymgv 2o11x 3kf4p 7s1h9 dbw3u kz28b wnm07 y49tz 07yo1 x3kf4 9joh9
tzgfa cdx5h viw3e ukfas j8bw5 fau4r kzgvw 3y68r iex3g x3ecd rym05
hbq07 y6auk xh9dx pt7y4 r49t5 lp7iy 6qkhv ozwl9 tj6q0 p7cv4 r4p11
1xj8b ctj6q 0p7s3 kfo13 05hba sjmy6 sl9zm ieu28 9z2oz 0n6s1 hbqiy
oj8t5 hvo1x 3kzw5 f4p7s ltlp7 cdddd bqkx3 0n05z gf8ba as1h9 drkz2
oj8ry ohbct l7cdb cbq07 y6q2o 11xjs 3gx3u 4p7ie eewln qigv2 q0n05
foz07 yohpr kz07c bq26s jo13u 47ecv oh5f8 rkfas 307ct zgfac tl9dr
iecdx 30pn6 89dba as111 hv47s ltlp7 cdxp9 zm07c viy6s 3ecdr iyo1x
j8r4p nqieu 4r68b ctjmy o1nsl p7iym yo1n8 9dbq2 o1hpr kfoz0 n6slp
```

O random code practice, FO = 2

```
note:     =    dahdidididah
          /    dahdididahdit
          *    didididahdidah    SK
          +    didahdididit      AS
          -    didahdidahdit     AR
```

```
2ozmy 8n2=s 5+gvo zas5z my8n6 mct.o h.ec+ u6q4p 34ppp l9xp9 9b8?p
7kxp? lf-?x dzsf, p95vc xh.iw 3u6qe ukb,t j8ria wh7/u kxttd fs5.w
3-vmy iw70j eu26, tnkfe ukb,p 7w7/u 6qie- vctxz ecb,p t.kxv ukfs1
n8n,+ cbgvu kb8?z ,+iwh ?3qeu 6q09+ k15.w 3-vmy iw7w3 qieym ct1bi
w7w3q eyie- *n6qe y474p vas1x h7y8n 6q09b ,pt.k 1biw7 w3u6q eugvg
*vct7 8?jmc t.kxv ugz4p 34ppl 5*1xh 72o3/ ugvuk fohfg z4ljs 5*l+i
09ln6 mct78 9zawh 7a/,t pt789 zas1f ey474 l+iwl tr6qe -vmym gz-rq
05dhh *n6qi e-rwl tr=/u kf68r ozsf- *d9+0 nukbm c+47y 8n6q4 p34l9
1?xhj 8nwh. yi09l n6mct .k1f= ozsf- ?11n8 n8n,+ gvoza s1b26 8rozw
7k1*h tj8n2 =odzs f,tpx ns1fi e-vct 1f=sj 4789z ectvq ey8nw ln2=s
5+gvo 32k1f =sfkb 8?voz ectvq iec+o d?z-v /-?xh j8rcx +u26, tj47/
ukxtp t78?j q4ljw hh?3u 6m268 n,.w3 c+yie -*jeu 2=s1n 8n8rs fgvct
789za wlria s5zmy 8riaw lrias 1b268 rsfgv g*vg* z4ljw hlxbe yi055
3=/-v /-?xh fgz4p 7k1*d 9+0nu kbmc+ 0j/,. 2od?z ,.2kx hfgz4 lf-*d
?z-ru g*1xh 72o3/ ukf=s j8ns1 b268n ,.0no 3==sj mcb8 9zawh .ymcx
h.i0j ia/q4 pl5*1 txzaw 305dh h*jeu 2=odz sjwl9 ln2=s 1rozw 3091?
xhj8n wln2= s1rsf gz05v cxh.e cbeyi wh?3q eym2k 1bmgz ,+iwl tvqia
sf,p9 9+kxh fgvg* z4p7k xp?p7 g*5d? f=ohf kfs5. 0j47/ uk1*d 9bkbm
gvsjq 09b,t db89+ 4.i0j iaa/- ?xhj4 789ze -*jey ias5z m2kfe ukfs5
+gz,. 2k11n ,.w3- vqey4 .odnu gzec+ k15+c bkf=s fkb8? z-rug dl9h.
u6,pt 74l+i 09h7/ uk1?x dzw7k xp?p7 g*1t1 biw3- r===o zawh. u2kxh
j8r-* n2=/u gvy8n wln6q 05rwh *jeu6 q05r0 9h7a/ -?11n ,+gz, +iwh*
```

J random code practice, FO = 3

```
rfdmt  duiry  xmgqg  oshqt  hofba  nbgof  dmrpo  sjepf  ohhfr  lvphj  mgdou
ipoux  irhsj  entux  bxhks  jdhqg  ofbal  lmgbt  kqgdr  fball  menpg  qgbyx
hkqvv  daayk  foswy  zqtcm  rnjtj  ngqie  alqvv  dcouk  ficbq  tmrir  xvjux
ukdww  jwjks  hqiep  foftb  pjrji  pgbvy  ksjdh  qgofd  mtfkq  tmrip  ldzcz
czepy  xalme  nnuic  bqtoh  cbrzl  dshou  iptmr  gdrhp  enpie  anent  fksjg
ballo  uvfqg  qipgd  houkf  pyxan  cmtfk  shuvu  xxalo  uvfqi  eczyx  xzqvq
ipjrj  iruxr  goswl  dqtie  czdrf  banbi  entwj  thxmg  ouicz  enipm  ricos
jlqgo  ukdzc  zcbsh  ihofb  allmg  djcme  pbyks  jcmgd  jcmen  nuicb  shshq
thqtj  entwj  vxtwy  kshpd  mgqvq  ipjrh  sjeph  cbrxv  juxuk  dwwju  vgofw
yxxzo  fwwjr  hsjen  rirxx  zqtea  lvphj  mgdou  kfksj  ipenn  uicze  nkfgd
mecbg  ofbal  lmgbv  ymeph  laals  uicoh  frlvn  rrcof  mrnjt  jlqgo  uiptm
twljd  houkd  bqtof  mtbpj  rjipg  dhouk  dbshs  jczne  phlym  twykq  thxkq
iecmt  dwyzo  hkqvv  fqicm  rgbdb  zwjrh  shqtj  ephcz  bfpha  lxdnz  uirhu
xkfnk  dqtie  cbrxv  lkdwy  xcbic  bbmtv  vuvjw  laals  ukqip  jrjgb  allos
jlqic  mepby  mepgo  uxkfp  yzofw  wldze  nipkf  qgqgd  ofxui  reezw  lfpwl
kfksh  uvuxz  qtean  ljbvw  ymrfb  yxhks  jbtie  cbpjp  tohcz  bfpha  lvntd
uipkd  cmeal  mgbvw  wwjrj  irsjn  ecoui  pqipg  dhqic  zlqtj  lqgqi  czlsj
btkqi  pldze  pyzoh  kqtjn  ecmgq  tcmrn  lhnns  wyzof  ykdbz  yzldq  vwykf
nripj  ptoha  nlhnn  uksjg  dofxu  ipqgb  alnay  ztcmt  brzlf  epico  hanjv
vfqgo  uxipv  anenr  posho  hpenp  icohc  brzlf  epicm  tuxbz  vqipl  dbshu
xkfpw  lkfic  bqtmt  wjvvd  aaykf  qgouv  wjpkf  qicmr  irxvl  kficb  sjiru
vdcmg  qtcmr  njvvf  ouien  kfenu  kqtof  ohftb  rxvli  posje  phczb  fntwj
```

N random code practice, FO = 3 (also G, sent as single chars)

```
dxj89  zm0nk  z26q2  qkzw5  zgx3g  drigx  j8trq  kf4pr  kxxh9  dx5hv  iw3eu
4rq0n  kx3kf  49zgd  xpn68  9tjmi  gx3gx  3ecdb  q289d  x3gx3  ew5v2  6s30p
n6s1h  v26ac  bau2o  zgfu4  9t5lp  n6qie  wns1h  vieuk  fu47c  vojoh  9dbw3
ukz28  bcv2o  jmy4p  rkhp1  11xj8  bcdry  689tj  migxj  89fac  vojo1  hpr4r
4rkfo  js3ew  5fau4  7cv47  s1hp1  foj6q  khvoj  89ddb  w5vie  w30p9  fasjs
3gx3u  khbq2  68bct  j6q05  fojsj  289fa  s307c  tjs3u  khbqi  ecv49  tzgv2
o11xj  8rkx3  y6as1  f8baa  sl9dx  3gdry  49zw5  l9z26  aau4r  kz07s  3eeu4
p7iy6  q0pr4  r47s3  kzgx3  gx3ec  tzeew  lnq2o  zeect  zeew5  fau47  s3kzw
5zw5f  49zw5  1xjmy  68tl3  ymgv2  o11x3  kf4p7  s1h9d  bw3uk  z28bw  nm07y
49tz0  7yo1x  3kf49  joh9t  zgfac  dx5hv  iw3eu  kfasj  8bw5f  au4rk  zgvw3
y68ri  gx3gx  3ecdr  ym05h  bq07y  6aukx  h9dxp  t7y4r  49t5l  p7iy6  qkhvo
zwl9t  j6q0p  7cv4r  4p111  xj8bc  tj6q0  p7s3k  fo130  5hbas  jmy6s  l9zmi
eu289  z2oz0  n6s1h  bqiyo  j8t5h  vo1x3  kzw5f  4p7sl  tlp7c  ddddb  qkx30
n05zg  f8baa  s1h9d  rkz2o  j8ryo  hbctl  7cdbc  bq07y  6q2o1  1xjs3  gx3u4
p7iee  ewlnq  igv2q  0n05f  oz07y  ohprk  z07cb  q26sj  om3u4  7ecvo  h5f8r
kfas3  07ctz  gfact  l9dri  ecdx3  0pn68  9dbaa  s111h  v47sl  tlp7c  dxp9z
m07cv  iy6s3  ecdri  yo1xj  8r4pn  qieu4  r68bc  tjmyo  1nslp  7iymy  o1n89
dbq2o  1hprk  foz0n  6slpn  qiymg  fu49t  lt5fu  2oz07  ew5hv  4p1f8  riewl
9jo11  hv47c  tlt5f  aasjs  jo13u  4r6s3  gxjm0  5fu4p  1hp1v  gviy4  7ct51
hbq2q  0nkhb  w30pt  rqkzg  dbw5v  iy47s  1hp1v  gviyo  zgdx5  v2o1h  p7s30
n05f8  rkfu4  7cvoz  w51hv  26acb  q2q07  sl7cb  qiyoj  oh9dr  kfu47  sj8rk
hviym  gfu49  t51hb  aaukz  gvgfa  acv4r  kxhp1  h9dr4  rqkf4  p7slt  l9zw5
```

O random code practice, FO = 3

```
note:    =    dahdidididah
         /    dahdididahdit
         *    didididahdidah    SK
         +    didahdididit      AS
         -    didahdidahdit     AR
```

```
pt.k1 biw7w 3u6qe ugvg* vct78 ?jmct .kxvu gz4p3 4ppl5 *1xh7 2o3/u
gvukf ohfgz 4ljs5 *l+i0 9ln6m ct789 zawh7 a/,tp t789z as1fe y474l
+iwlt r6qe- vmymg z-rq0 5dhh* n6qie -rwlt r=/uk f68ro zsf-* d9+0n
ukbmc +47y8 n6q4p 34191 ?xhj8 nwh.y i09ln 6mct. k1f=o zsf-? 11n8n
8n,+g vozas 1b268 rozw7 k1*ht j8n2= odzsf ,tpxn s1fie -vct1 f=sj4
789ze ctvqe y8nwl n2=s5 +gvo3 2k1f= sfkb8 ?voze ctvqi ec+od ?z-v/
-?xhj 8rcx+ u26,t j47/u kxtpt 78?jq 4ljwh h?3u6 m268n ,.w3c +yie-
*jeu2 =s1n8 n8rsf gvct7 89zaw lrias 5zmy8 riawl rias1 b268r sfgvg
*vg*z 4ljwh lxbey i0553 =/-v/ -?xhf gz4p7 k1*d9 +0nuk bmc+0 j/,.2
od?z, .2kxh fgz4l f-*d? z-rug *1xh7 2o3/u kf=sj 8ns1b 268n, .0no3
==sjm ct789 zawh. ymcxh .i0ji a/q4p l5*1t xzaw3 05dhh *jeu2 =odzs
jwl9l n2=s1 rozw3 091?x hj8nw ln2=s 1rsfg z05vc xh.ec beyiw h?3qe
ym2k1 bmgz, +iwlt vqias f,p99 +kxhf gvg*z 4p7kx p?p7g *5d?f =ohfk
fs5.0 j47/u k1*d9 bkbmg vsjq0 9b,td b89+4 .i0ji aa/-? xhj47 89ze-
*jeyi as5zm 2kfeu kfs5+ gz,.2 k11n, .w3-v qey4. odnug zec+k 15+cb
kf=sf kb8?z -rugd l9h.u 6,pt7 4l+i0 9h7/u k1?xd zw7kx p?p7g *1t1b
iw3-r ===oz awh.u 2kxhj 8r-*n 2=/ug vy8nw ln6q0 5rwh* jeu6q 05r09
h7a/- ?11n, +gz,+ iwh*n 2==/- rq05d l51by mgz,. 6899+ ohtj4 .u68?
lf-?x dzw7g dl51b 2=sj4 .odnu gvy47 893y4 prq09 1*htn kfiaw 7gdhl
tvqeu kfod3 -vctx vugvc xns1f iaw7k 1*htn kfias js5*p v/-?1 1rsfk
fs5+c bkf68 rozsj whltr 6qe-v qeukb ,p3-v qiasf -*d9b kf68r sj8rc
tr==/ -rq05 dhltv m26,. 0nkb2 =ozw3 4pl91 *d9bg vugz4 p7kxp ?ljwh
```

J random code practice, FO = 4

```
drhpe  npiea  nentf  ksjgb  allou  vfqgq  ipgdh  oukfp  yxanc  mtfks  huvux
xalou  vfqie  czyxx  zqvqi  pjrji  ruxrg  oswld  qtiec  zdrfb  anbie  ntwjt
hxmgo  uicze  nipmr  icosj  lqgou  kdzcz  cbshs  hofba  llmgd  jcmep  byksj
cmgdj  cmenn  uicbs  hshqt  hqtje  ntwjv  xtwyk  shpdm  gqvqi  pjrhs  jephc
brxvj  uxukd  wwjuv  gofwy  xxzof  wwjrh  sjenr  irxxz  qteal  vphjm  gdouk
fksji  pennu  iczen  kfgdm  ecbgo  fball  mgbvy  mephl  aalsu  icohf  rlvnr
rcofm  rnjtj  lqgou  iptmt  wljdh  oukdb  qtofm  tbpjr  jipgd  houkd  bshsj
cznep  hlymt  wykqt  hxkqi  ecmtd  wyzoh  kqvvf  qicmr  gbdbz  wjrhs  hqtje
phczb  fphal  xdnzu  irhux  kfnkd  qtiec  brxvl  kdwyx  cbicb  bmtvv  uvjwl
aalsu  kqipj  rjgba  llosj  lqicm  epbym  epgou  xkfpy  zofww  ldzen  ipkfq
gqgdo  fxuir  eczwl  fpwlk  fkshu  vuxzq  teanl  jbvwy  mrfby  xhksj  btiec
bpjpt  ohczb  fphal  vntdu  ipkdc  mealm  gbvww  wjrji  rsjne  couip  qipgd
hqicz  lqtjl  qgqic  zlsjb  tkqip  ldzep  yzohk  qtjne  cmgqt  cmrnl  hnnsw
yzofy  kdbzy  zldqv  wykfn  ripjp  tohan  lhnnu  ksjgd  ofxui  pqgba  lnayz
tcmtb  rzlfe  picoh  anjvv  fqgou  xipva  nenrp  oshoh  penpi  cohcb  rzlfe
picmt  uxbzv  qipld  bshux  kfpwl  kficb  qtmtw  jvvda  aykfq  gouvw  jpkfq
icmri  rxvlk  ficbs  jiruv  dcmgq  tcmrn  jvvfo  uienk  fenuk  qtofo  hftbr
xvlip  osjep  hczbf  ntwjt  jlswy  mgbzv  qgbfp  fmrnj  vvdco  swlyk  dcosw
layxm  goswy  zqtea  lxdnb  ientw  jthza  ymgos  wwjuv  ealou  vdcos  wlayx
kqgqi  czngb  xfwwj  pvczw  jptoh  czdtt  hqthq  thofd  ohlym  twwwy  xvlip
qiruv  fouks  jirux  tuiea  lvnrr  cohcb  pjpvc  bkfpf  mtbpl  fnkds  jcouv
dcmec  biczl  qvvda  aymrg  osuxz  qtecb  pjrji  penpg  ouxir  jiruv  dayks
```

N random code practice, FO = 4 (also G, sent as single chars)

```
9ddbw 5view 30p9f asjs3 gx3uk hbq26 8bctj 6q05f ojsj2 89fas 307ct
js3uk hbqie cv49t zgv2o 11xj8 rkx3y 6as1f 8baas l9dx3 gdry4 9zw5l
9z26a au4rk z07s3 eeu4p 7iy6q 0pr4r 47s3k zgx3g x3ect zeewl nq2oz
eectz eew5f au47s 3kzw5 zw5f4 9zw51 xjmy6 8tl3y mgv2o 11x3k f4p7s
1h9db w3ukz 28bwn m07y4 9tz07 yo1x3 kf49j oh9tz gfacd x5hvi w3euk
fasj8 bw5fa u4rkz gvw3y 68rig x3gx3 ecdry m05hb q07y6 aukxh 9dxpt
7y4r4 9t5lp 7iy6q khvoz wl9tj 6q0p7 cv4r4 p111x j8bct j6q0p 7s3kf
o1305 hbasj my6sl 9zmie u289z 2oi0n 6s1hb qiyoj 8t5hv o1x3k zw5f4
p7slt lp7cd dddbq kx30n 05zgf 8baas 1h9dr kz2oj 8ryoh bctl7 cdbcb
q07y6 q2o11 xjs3g x3u4p 7ieee wlnqi gv2q0 n05fo z07yo hprkz 07cbq
26sjo 13u47 ecvoh 5f8rk fas30 7ctzg factl 9drie cdx30 pn689 dbaas
111hv 47slt lp7cd xp9zm 07cvi y6s3e cdriy o1xj8 r4pnq ieu4r 68bct
jmyo1 nslp7 iymyo 1n89d bq2o1 hprkf oz0n6 slpnq iymgf u49tl t5fu2
oz07e w5hv4 p1f8r iewl9 jo11h v47ct lt5fa asjsj o13u4 r6s3g xjm05
fu4p1 hp1vg viy47 ct51h bq2q0 nkhbw 30ptr qkzgd bw5vi y47s1 hp1vg
viyoi gdx5v 2o1hp 7s30n 05f8r kfu47 cvozw 51hv2 6acbq 2q07s l7cbq
iyojo h9drk fu47s j8rkh viymg fu49t 51hba aukzg vgfaa cv4rk xhp1h
9dr4r qkf4p 7sltl 9zw5l p7ymy mgx5v 28tlp r49t5 1hvie ecbac vieec
bqkz2 6au2o zgfac ddddr y49zw 5l9fa u26au 28bwn 6s3uk hviee cbqkz
miymy o13gx p7yo1 hbcvo 1hv47 sl9t5 zw5zw 5zgxj ohbas jmiy4 9dr4r
68rkh baaas j8rkx j6aac dxpt7 y47s1 11hbc bwlpr 4p11h 5zgfo zeukh
viy68 ryo1n s1hv2 6as3y 6actz gfas1 11xj8 bw5v2 q0nkx j8rkh v2q2o
```

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O random code practice, FO = 4

```
note:    =      dahdidididah
         /      dahdididahdit
         *      didididahdidah     SK
         +      didahdididit       AS
         -      didahdidahdit      AR
```

```
tpxns 1fie- vct1f =sj47 89zec tvqey 8nwln 2=s5+ gvo32 k1f=s fkb8?
vozec tvqie c+od? z-v/- ?xhj8 rcx+u 26,tj 47/uk xtpt7 8?jq4 ljwhh
?3u6m 268n, .w3c+ yie-* jeu2= s1n8n 8rsfg vct78 9zawl rias5 zmy8r
iawlr ias1b 268rs fgvg* vg*z4 ljwhl xbeyi 0553= /-v/- ?xhfg z4p7k
1*d9+ 0nukb mc+0j /,.2o d?z,. 2kxhf gz4lf -*d?z -rug* 1xh72 o3/uk
f=sj8 ns1b2 68n,. 0no3= =sjmc t789z awh.y mcxh. i0jia /q4pl 5*1tx
zaw30 5dhh* jeu2= odzsj wl9ln 2=s1r ozw30 91?xh j8nwl n2=s1 rsfgz
05vcx h.ecb eyiwh ?3qew m2k1b mgz,+ iwltv qiasf ,p99+ kxhfg vg*z4
p7kxp ?p7g* 5d?f= ohfkf s5.0j 47/uk 1*d9b kbmgv sjq09 b,tdb 89+4.
i0jia a/-?x hj478 9ze-* jeyia s5zm2 kfeuk fs5+g z,.2k 11n,. w3-vq
ey4.o dnugz ec+k1 5+cbk f=sfk b8?z- rugdl 9h.u6 ,pt74 l+i09 h7/uk
1?xdz w7kxp ?p7g* 1t1bi w3-r= ==oza wh.u2 kxhj8 r-*n2 =/ugv y8nwl
n6q05 rwh*j eu6q0 5r09h 7a/-? 11n,+ gz,+i wh*n2 ==/-r q05dl 51bym
gz,.6 899+o htj4. u68?l f-?xd zw7gd l51b2 =sj4. odnug vy478 93y4p
rq091 *htnk fiaw7 gdhlt vqeuk fod3- vctxv ugvcx ns1fi aw7k1 *htnk
fiasj s5*pv /-?11 rsfkf s5+cb kf68r ozsjw hltr6 qe-vq eukb, p3-vq
iasf- *d9bk f68rs j8rct r==/- rq05d hltvm 26,.0 nkb2= ozw34 pl91*
d9bgv ugz4p 7kxp? ljwhh *jiey mg*pv /,p?p 305dh ltr=/ q4.e- r=/q4
.iw3u 6mymg z-rug *5d?j q4ljw hh?7a /u6my mc+0j =ozec tr=/q 4.iw3
qeu6q 05vg* l.2kx d3c+k xdzw7 kxtt* vg*vg *vct. oh.ec beu2o d9bgv
y8rct vm2=s j8rcx ba/ug *1txz aw7k1 ?xd3c b8?p3 091?1 5.0j8 riect
```

J random code practice, FO = 5

```
rxxzq  tealv  phjmg  doukf  ksjip  ennui  czenk  fgdme  cbgof  ballm  gbvym
ephla  alsui  cohfr  lvnrr  cofmr  njtjl  qgoui  ptmtw  ljdho  ukdbq  tofmt
bpjrj  ipgdh  oukdb  shsjc  zneph  lymtw  ykqth  xkqie  cmtdw  yzohk  qvvfq
icmrg  bdbzw  jrhsh  qtjep  hczbf  phalx  dnzui  rhuxk  fnkdq  tiecb  rxvlk
dwyxc  bicbb  mtvvu  vjwla  alsuk  qipjr  jgbal  losjl  qicme  pbyme  pgoux
kfpyz  ofwwl  dzeni  pkfqg  qgdof  xuire  czwlf  pwlkf  kshuv  uxzqt  eanlj
bvwym  rfbyx  hksjb  tiecb  pjpto  hczbf  phalv  ntdui  pkdcm  ealmg  bvwww
jrjir  sjnec  ouipq  ipgdh  qiczl  qtmlq  gqicz  lsjbt  kqipl  dzepy  zohkq
tjnec  mgqtc  mrnlh  nnswy  zofyk  dbzyz  ldqvw  ykfnr  ipjpt  ohanl  hnnuk
sjgdo  fxuip  qgbal  nayzt  cmtbr  zlfep  icoha  njvvf  qgoux  ipvan  enrpo
shohp  enpic  ohcbr  zlfep  icmtu  xbzvq  ipldb  shuxk  fpwlk  ficbq  tmtwj
vvdaa  ykfqg  ouvwj  pkfqi  cmrir  xvlkf  icbsj  iruvd  cmgqt  cmrnj  vvfou
ienkf  enukq  tofoh  ftbrx  vlipo  sjeph  czbfn  twjtj  lswym  gbzvq  gbfpf
mrnjv  vdcos  wlykd  coswl  ayxmg  oswyz  qteal  xdnbi  entwj  thzay  mgosw
wjuve  alouv  dcosw  layxk  qgqic  zngbx  fwwjp  vczwj  ptohc  zdtth  qthqt
hofdm  hlymt  wwwyx  vlipq  iruvf  ouksj  iruxt  uieal  vnrrc  ohcbp  jpvcb
kfpfm  tbplf  nkdsj  couvd  cmecb  iczlq  vvdaa  ymrgo  suxzq  tecbp  jrjip
enpgo  uxirj  iruvd  ayksh  qienr  ipjpt  mtwlj  djeay  ztcoh  ftbrz  lfgby
kqtkq  gbfpf  mtzbf  phalv  nrrea  lqvvd  aymgd  mgqvs  wjvvd  aaayz  aayks
uicof  tbrzl  fensu  kdshq  iephc  zdrhr  uvfqi  cmtuv  ntdui  ryxme  cosuv
ecbgq  thqtj  entux  bxfwy  zjran  eayme  pieal  shpdo  ukfic  zczen  kfgdm
gqvqi  rzjra  lqicm  gbtkq  irxvj  uvgqt  cmrlx  bzvqi  plfpy  xczui  pvcbk
```

N random code practice, FO = 5 (also G, sent as single chars)

```
h9tzg facdx 5hviw 3eukf asj8b w5fau 4rkzg vw3y6 8rigx 3gx3e cdrym
05hbq 07y6a ukxh9 dxpt7 y4r49 t5lp7 iy6qk hvozw l9tj6 q0p7c v4r4p
111xj 8bctj 6q0p7 s3kfo 1305h basjm y6sl9 zmieu 289z2 oz0n6 s1hbq
iyoj8 t5hvo 1x3kz w5f4p 7sltl p7cdd ddbqk x30n0 5zgf8 baas1 h9drk
z2oj8 ryohb ctl7c dbcbq 07y6q 2o11x js3gx 3u4p7 ieeew lnqig v2q0n
05foz 07yoh prkz0 7cbq2 6sjo1 3u47e cvoh5 f8rkf as307 ctzgf actl9
driec dx30p n689d baas1 11hv4 7sltl p7cdx p9zm0 7cviy 6s3ec driyo
1xj8r 4pnqi eu4r6 8bctj myo1n sln7i ymyo1 n89db q2o1h prkfo z0n6s
lpnqi ymgfu 49tlt 5fu2o z07ew 5hv4p 1f8ri ewl9j o11hv 47ctl t5faa
sjsjo 13u4r 6s3gx jm05f u4p1h p1vgv iy47c t51hb q2q0n khbw3 0ptrq
kzgdb w5viy 47s1h p1vgv iyozg dx5v2 o1hp7 s30n0 5f8rk fu47c vozw5
1hv26 acbq2 q07sl 7cbqi yojoh 9drkf u47sj 8rkhv iymgf u49t5 1hbaa
ukzgv gfaac v4rkx hp1h9 dr4rq kf4p7 sltl9 zw5lp 7ymym gx5v2 8tlpr
49t51 hviee cbacv ieecb qkz26 au2oz gfacd dddry 49zw5 l9fau 26au2
8bwn6 s3ukh vieec bqkzm iymyo 13gxp 7yo1h bcvo1 hv47s l9t5z w5zw5
zgxjm hbasj miy49 dr4r6 8rkhb aaasj 8rkxj 6aacd xpt7y 47s11 1hbcb
wlpr4 p11h5 zgfoz eukhv iy68r yo1ns 1hv26 as3y6 actzg fas11 1xj8b
w5v2q 0nkxj 8rkhv 2q2oj my49j o11hv ozwl9 tzum0 5fukx hp1hp 1vwnq
28bq2 8tlpr 4pltl p7cdx pt7ew ns1hv 2qiw3 ymgvi w51hv 26qkf aaumy
6aukh p1hp1 vgfum gfojm y4p7s l9ddr khbqi yozgx p9zm0 nkz2q ieewn
68riw 5zw5f 49zgd xp7y4 pln0n q2qig viewn 8tl3e ukfu4 r4rkz gvw3y
mgv2o hpln0 7ieee cdbq2 oh9db wnmgf u49dd x5v2o 1h5fo j8bqk hbcbw
```

O random code practice, FO = 5

```
note:    =    dahdidididah
         /    dahdididahdit
         *    dididididahdidah    SK
         +    didahdididit        AS
         -    didahdidahdit       AR
```

```
*d?z- rug*1 xh72o 3/ukf =sj8n s1b26 8n,.0 no3== sjmct 789za wh.ym
cxh.i 0jia/ q4pl5 *1txz aw305 dhh*j eu2=o dzsjw l9ln2 =s1ro zw309
1?xhj 8nwln 2=s1r sfgz0 5vcxh .ecbe yiwh? 3qeym 2k1bm gz,+i wltvq
iasf, p99+k xhfgv g*z4p 7kxp? p7g*5 d?f=o hfkfs 5.0j4 7/uk1 *d9bk
bmgvs jq09b ,tdb8 9+4.i 0jiaa /-?xh j4789 ze-*j eyias 5zm2k feukf
s5+gz ,.2k1 1n,.w 3-vqe y4.od nugze c+k15 +cbkf =sfkb 8?z-r ugdl9
h.u6, pt74l +i09h 7/uk1 ?xdzw 7kxp? p7g*1 t1biw 3-r== =ozaw h.u2k
xhj8r -*n2= /ugvy 8nwln 6q05r wh*me u6q05 r09h7 a/-?1 1n,+g z,+iw
h*n2= =/-rq 05dl5 1bymg z,.68 99+oh tj4.u 68?lf -?xdz w7gdl 51b2=
sj4.o dnugv y4789 3y4pr q091* htnkf iaw7g dhltv qeukf od3-v ctxvu
gvcxn s1fia w7k1* htnkf iasjs 5*pv/ -?11r sfkfs 5+cbk f68ro zsjwh
ltr6q e-vqe ukb,p 3-vqi asf-* d9bkf 68rsj 8rctr ==/-r q05dh ltvm2
6,.0n kb2=o zw34p l91*d 9bgvu gz4p7 kxp?l jwhh* jieym g*pv/ ,p?p3
05dhl tr=/q 4.e-r =/q4. iw3u6 mymgz -rug* 5d?jq 4ljwh h?7a/ u6mym
c+0j= ozect r=/q4 .iw3q eu6q0 5vg*l .2kxd 3c+kx dzw7k xtt*v g*vg*
vct.o h.ecb eu2od 9bgvy 8rctv m2=sj 8rcxb a/ug* 1txza w7k1? xd3cb
8?p30 91?15 .0j8r iectr ===sj q05rw ltr6q ec+u2 68?z- ruk1? xhj8n
s1feu kfohj 8rctr 6my8n 6q4lf -?xdz sjwl9 lrmy4 prq4p l91*h tnozm
y47a/ ,p?p3 09xp? p7g*1 txze- rwltr 6m2o3 =/-va whltr 6qiw7 aa/qi
a/q4l 91*ht nkbyi 0j8n6 q4p7k xtpxr ctvqi asjs1 t1biw 7w3u2 =/q0j
=sjmg *vg*z 4ljs5 *l.2o hp70n 26m2k fie-r 0553/ ukf68 n8n,. 0no3=
/-v/- *hp70 jeyia wh7a/ -*d9+ 0j/-r q05*5 *pv/- ?15+g vsf=o d3cb8
```

J random code practice, FO = 6

```
osjlq icmep bymep gouxk fpyzo fwwld zenip kfqgq gdofx uirec zwlfp
wlkfk shuvu xzqte anljb vwymr fbyxh ksjbt iecbp jptoh czbfp halvn
tduip kdcme almgb vwwwj rjirs jneco uipqi pgdhq iczlq tjlqg qiczl
sjbtk qipld zepyz ohkqt jnecm gqtcm rnlhn nswyz ofykd bzyzl dqvwy
kfnri pjpto hanlh nnuks jgdof xuipq gbaln ayztc mtbrz lfepi cohan
jvvfq gouxi pvane nrpos hohpe npico hcbrz lfepi cmtux bzvqi pldbs
huxkf pwlkf icbqt mtwjv vdaay kfqgo uvwjp kfqic mrirx vlkfi cbsji
ruvdc mgqtc mrnjv vfoui enkfe nuaqt ofohf tbrxv lipos jephc zbfnt
wjtjl swymg bzvqg bfpfm rnjvv dcosw lykdc oswla yxmgo swyzq tealx
dnbie ntwjt hzaym gosww juvea louvd coswl ayxkq gqicz ngbxf wwjpv
czwjp tohcz dtthq thqth ofdoh lymtw wwyxv lipqi ruvfo uksji ruxtu
iealv nrrco hcbpj pvcbk fpfmt bplfn kdsjc ouvdc mecbi czlqv vdaay
mrgos uxzqt ecbpj rjipe npgou xirji ruvda ykshq ienri pjptm twljd
jeayz tcohf tbrzl fgbyk qtkqg bfpfm tzbfp halvn rreal qvvda ymgdm
gqvsw jvvda aayza ayksu icoft brzlf ensuk dshqi ephcz drhru vfqic
mtuve tduir yxmec osuve cbgqt hqtje ntuxb xfwyz jrane aymep ieals
hpdou kficz czenk fgdmg qvqir zjral qicmg btkqi rxvju vgqtc mrlxb
zvqip lfpyx czuip vcbkf pfohf tzbdz nepfv gqtco hftzd tvvwj pkfou
iepwj wlaan eaaym rgouk dzenk dqtkq ipjrh uvuxx ancmt ficzc zepyx
ancmt dwyzo fwwjp tohal xdnbi czlqt jlsui ecbrx vlkfk shsje phczd
tvvux zohks jdjco shzay kswyk qvvdc oswjm enuks jgbyx hmenr pqipg
dhosw lfgba ayzym ecosw jkqvw ykfnt wljbv wykdz lqvvf ouicb qvczy
```

```
u4p7i  eeewl  nqigv  2q0n0  5foz0  7yohp  rkz07  cbq26  sjo13  u47ec  voh5f
8rkfa  s307c  tzgfa  ctl9d  riecd  x30pn  689db  aas11  1hv47  sltlp  7cdxp
9zm07  cviy6  s3ecd  riyo1  xj8r4  pnqie  u4r68  bctjm  yo1ns  lp7iy  myo1n
89dbq  2o1hp  rkfoz  0n6sl  pnqiy  mgfu4  9tlt5  fu2oz  07ew5  hv4p1  f8rie
wl9jo  11hv4  7ctlt  5faas  jsjo1  3u4r6  s3gxj  m05fu  4p1hp  1vgvi  y47ct
51hbq  2q0nk  hbw30  ptrqk  zgdbw  5viy4  7s1hp  1vgvi  yozgd  x5v2o  1hp7s
30n05  f8rkf  u47cv  ozw51  hv26a  cbq2q  07sl7  cbqiy  ojoh9  drkfu  47sj8
rkhvi  ymgfu  49t51  hbaau  kzgvg  faacv  4rkxh  p1h9d  r4rqk  f4p7s  ltl9z
w5lp7  ymymg  x5v28  tlpr4  9t51h  vieec  bacvi  eecbq  kz26a  u2ozg  facdd
ddry4  9zw5l  9fau2  6au28  bwn6s  3ukhv  ieecb  qkzmi  ymyo1  3gxp7  yo1hb
cvo1h  v47sl  9t5zw  5zw5z  gxjoh  basjm  iy49d  r4r68  rkhba  aasj8  rkxj6
aacdx  pt7y4  7s111  hbcbw  lpr4p  11h5z  gfoze  ukhvi  y68ry  o1ns1  hv26a
s3y6a  ctzgf  as111  xj8bw  5v2q0  nkxj8  rkhv2  q2ojm  y49jo  11hvo  zwl9t
zum05  fukxh  p1hp1  vwnq2  8bq28  tlpr4  pltlp  7cdxp  t7ewn  s1hv2  qiw3y
mgviw  51hv2  6qkfa  aumy6  aukhp  1hp1v  gfumg  fojmy  4p7sl  9ddrk  hbqiy
ozgxn  9zm0n  kz2qi  eewn6  8riw5  zw5f4  9zgdx  p7y4p  ln0nq  2qigv  iewn8
tl3eu  kfu4r  4rkzg  vw3ym  gv2oh  pln07  ieeec  dbq2o  h9dbw  nmgfu  49ddx
5v2o1  h5foj  8bqkh  bcbwl  prkxh  plt51  3051n  mgfuk  xhpl9  tl7sl  7cbaa
ukf8b  cbq0n  q26as  3y6q0  prkzg  f8bq2  o11x3  07ctj  sj289  fu4r4  rkfoj
sj289  z2oz0  7yo1h  v47cd  dddry  o1nsl  p7y6a  as1h9  drkfa  s3kf4  p7sl9
tl7ct  z0n68  9tzeu  49fau  mymy6  s1hvi  eecvi  gfaas  js30p  nm0pt  r68bc
tj6as  1vwn6  qkfu2  qieec  v28ri  ewl9z  wl9dr  iew51  ns1hb  aau47  cbcv4
```

```
note:    =     dahdidididah
         /     dahdididahdit
         *     didididahdidah    SK
         +     didahdididit      AS
         -     didahdidahdit     AR
```

```
e-*je yias5 zm2kf eukfs 5+gz, .2k11 n,.w3 -vqey 4.odn ugzec +k15+
cbkf= sfkb8 ?z-ru gdl9h .u6,p t74l+ i09h7 /uk1? xdzw7 kxp?p 7g*1t
1biw3 -r=== ozawh .u2kx hj8r- *n2=/ ugvy8 nwln6 q05rw h*jeu 6q05r
09h7a /-?11 n,+gz ,+iwh *n2== /-rq0 5dl51 bymgz ,.689 9+oht j4.u6
8?lf- ?xdzw 7gdl5 1b2=s j4.od nugvy 47893 y4prq 091*h tnkfi aw7gd
hltvq eukfo d3-vc txvug vcxns 1fiaw 7k1*h tnkfi asjs5 *pv/- ?11rs
fkfs5 +cbkf 68roz sjwhl tr6qe -vqeu kb,p3 -vqia sf-*d 9bkf6 8rsj8
rctr= =/-rq 05dhl tvm26 ,.0nk b2=mz w34pl 91*d9 bgvug z4p7k xp?lj
whh*j ieymg *pv/, p?p30 5dhlt r=/q4 .e-r= /q4.i w3u6m ymgz- rug*5
d?jq4 ljwhh ?7a/u 6mymc +0j=o zectr =/q4. iw3qe u6q05 vg*l. 2kxd3
c+kxd zw7kx tt*vg *vg*v ct.oh .ecbe u2od9 bgvy8 rctvm 2=sj8 rcxba
/ug*1 txzaw 7k1?x d3cb8 ?p309 1?15. 0j8ri ectr= ==sjq 05rwl tr6qe
c+u26 8?z-r uk1?x hj8ns 1feuk fohj8 rctr6 my8n6 q4lf- ?xdzs jwl9l
rmy4p rq4pl 91*ht nozmy 47a/, p?p30 9xp?p 7g*1t xze-r wltr6 m2o3=
/-vaw hltr6 qiw7a a/qia /q4l9 1*htn kbyi0 j8n6q 4p7kx tpxrc tvqia
sjs1t 1biw7 w3u2= /q0j= sjmg* vg*z4 ljs5* l.2oh p70n2 6m2kf ie-r0
553/u kf68n 8n,.0 no3=/ -v/-* hp70j eyiaw h7a/- *d9+0 j/-rq 05*5*
pv/-? 15+gv sf=od 3cb8? p34pl 9xp95 vcxdj /-rq4 pl9xt tdb,p 3-vm2
6,+c+ 4.i0n 26qec +u2=s 1n,.0 j47a/ -?xhf kb8?v o32k1 f68n8 n,+gv
o32k1 bmgz, .2kxd zw7g* 5d?jq 05rwh *jia/ uk1*d 9bkf= sfgz4 p7kxt
tdb8? z,+i0 9lrie -?7a/ qieyi wltr= /q472 kb2=s j474l +mctx vy8nw
ln26, tnozq iw7/u 2=/q4 7y4.u 68?lj wl9h. u6895 rwltv m268r o3c+o
```

```
yztcm tbrzl fepic ohanj vvfqg ouxip vanen rposh ohpen picoh cbrzl
fepic mtuxb zvqip ldbsh uxkfp wlkfi cbqtm twjvv daayk fqgou vwjpk
fqicm rirxv lkfic bsjir uvdcm gqtcm rnjvv fouie nkfen ukqto fohft
brxvl iposj ephcz bfntw jtjls wymgb zvqgb fpfmr njvvd coswl ykdco
swlay xmgos wyzqt ealxd nbien twjth zaymg oswwj uveal ouvdc oswla
yxkqg qiczn gbxfw wjpvc zwjpt ohczd tthqt hqtho fdohl ymtww wyxvl
ipqir uvfou ksjir uxtui ealvn rrcoh cbpjp vcbkf pfmtb plfnk dsjco
uvdcm ecbic zlqvv daaym rgosu xztte cbpjr jipen pgoux irjir uvday
kshqi enrip jptmt wljdj eayzt cohft brzlf gbykq tkqgb fpfmt zbfph
alvnr realq vvday mgdmg qvswj vvdaa ayzaa yksui coftb rzlfe nsukd
shqie phczd rhruv fqicm tuvnt duiry xmeco suvec bgqth qtjen tuxbx
fwyzj ranea ymepi ealsh pdouk ficzc zenkf gdmgq vqirz jralq icmgb
tkqir xvjuv gqtcm rlxbz vqipl fpyxc zuipv cbkfp fohft zbdzn epfvg
qtcoh ftzdt vvwjp kfoui epwjw laane aaymr goukd zenkd qtkqi pjrhu
vuxxa ncmtf iczcz epyxa ncmtd wyzof wwjpt ohalx dnbic zlqtj lsuie
cbrxa lkfks hsjep hczdt vvuxz ohksj djcos hzayk swykq vvdco swjme
nuksj gbyxh menrp qipgd hoswl fgbaa yzyme coswj kqvwy kfntw ljbvw
ykdzl qvvfo uicbq vczyz jpmri cmepb ykqvw ymttj epfmt zbfpf mtbpl
dzcbq vczyz ldqvw wyzjp mrgou kdbqt mrgdr fbanz swldq vwwyz ldsho
suxzq tecbp lfnip kfqic mripj rjipe pdmgo hmgbx hkqtj ngqgq gdmtd
wwjuv gqvsu vntfi epwli pqgdm rrecz yzldq tksux bztcm tbrxx xalmg
dhqic zlqvx rgqgq vvuxx almen nuksh shqtj czlsj bvykq thzay kswww
```

N random code practice, FO = 7 (also G, sent as single chars)

```
05fu4 p1hp1 vgviy 47ct5 1hbq2 q0nkh bw30p trqkz gdbw5 viy47 s1hp1
vgviy ozgdx 5v2o1 hp7s3 0n05f 8rkfu 47cvo zw51h v26ac bq2q0 7sl7c
bqiyo joh9d rkfu4 7sj8r khviy mgfu4 9t51h baauk zgvgf aacv4 rkxhp
1h9dr 4rqkf 4p7sl tl9zw 5lp7y mymgx 5v28t lpr49 t51hv ieecb acvie
ecbqk z26au 2ozgf acddd dry49 zw5l9 fau26 au28b wn6s3 ukhvi eecbq
kzmiy myo13 gxp7y o1hbc vo1hv 47sl9 t5zw5 zw5zg xjohb asjmi y49dr
4r68r khbaa asj8r kxj6a acdxp t7y47 s111h bcbwl pr4p1 1h5zg fozeu
khviy 68ryo 1ns1h v26as 3y6ac tznfa s111x j8bw5 v2q0n kxj8r khv2q
2ojmy 49jo1 1hvoz wl9tz um05f ukxhp 1hp1v wnq28 bq28t lpr4p ltlp7
cdxpt 7ewns 1hv2q iw3ym gviw5 1hv26 qkfaa umy6a ukhp1 hp1vg fumgf
ojmy4 p7sl9 ddrkh bqiyo zgxp9 zm0nk z2qie ewn68 riw5z w5f49 zgdxp
7y4pl n0nq2 qigvi ewn8t l3euk fu4r4 rkzgv w3ymg v2ohp ln07i eeecd
bq2oh 9dbwn mgfu4 9ddx5 v2o1h 5foj8 bqkhb cbwlp rkxhp lt513 051nm
gfukx hpl9t l7sl7 cbaau kf8bc bq0nq 26as3 y6q0p rkzgf 8bq2o 11x30
7ctjs j289f u4r4r kfojs j289z 2oz07 yo1hv 47cdd ddryo 1nslp 7y6aa
s1h9i rkfas 3kf4p 7sl9t l7ctz 0n689 tzeu4 9faum ymy6s 1hvie ecvig
faasj s30pn m0ptr 68bct j6as1 vwn6q kfu2q ieecv 28rie wl9zw l9dri
ew51n s1hba au47c bcv4p l7s3e eewln q28ri ect5f 4pr4p ltlpr 4p11h
pr47c bcv4p 1f8ri y4pl7 s3y6q 0p7cv oj89d x3gdb as1f8 riy4p 1foj6
actzg fas11 h5z07 cbqiy ojo11 xj8bw l3ym0 nmgxp n6slp n6q26 sj89z
28bwn mgvig xp9fu kf8r4 r6sj8 t7ecv 4p1f8 bqigd x5fu4 p1h9t js3ec
tjmyo 1ns1x 3ymiw l7ctj s3ew5 faas3 kzw5f o1n89 dry6s l9fau mymiy
```

O random code practice, FO = 7

```
note:    =     dahdidididah
         /     dahdididahdit
         *     didididahdidah    SK
         +     didahdididit      AS
         -     didahdidahdit     AR
```

```
4prq0 91*ht nkfia w7gdh ltvqe ukfod 3-vct xvugv cxns1 fiaw7 k1*ht
nkfia sjs5* pv/-? 11rsf kfs5+ cbkf6 8rozs jwhlt r6qe- vqeuk b,p3-
vqias f-*d9 bkf68 rsj8r ctr== /-rq0 5dhlt vm26, .0nkb 2=ozw 34pl9
1*d9b gvugz 4p7kx p?ljw hh*ji eymg* pv/,p ?p305 dhltr =/q4. e-r=/
q4.iw 3u6my mgz-r ug*5d ?jq4l jwhh? 7a/u6 mymc+ 0j=oz ectr= /q4.i
w3qeu 6q05v g*l.2 kxd3c +kxdz w7kxt t*vg* vg*vc t.oh. ecbeu 2od9b
gvy8r ctvm2 =sj8r cxba/ ug*1t xzaw7 k1?xd 3cb8? p3091 ?15.0 j8rie
ctr== =sjq0 5rwlt r6qec +u268 ?z-eu k1?xh j8ns1 feukf ohj8r ctr6m
y8n6q 4lf-? xdzsj wl9lr my4pr q4pl9 1*htn ozmy4 7a/,p ?p309 xp?p7
g*1tx ze-rw ltr6m 2o3=/ -vawh ltr6q iw7aa /qia/ q4l91 *htnk byi0j
8n6q4 p7kxt pxrct vqias js1t1 biw7w 3u2=/ q0j=s jmg*v g*z4l js5*l
.2ohp 70n26 m2kfi e-r05 53/uk f68n8 n,.0n o3=/- v/-*h p70je yiawh
7a/-* d9+0j /-rq0 5*5*p v/-?1 5+gvs f=od3 cb8?p 34pl9 xp95v cxdj/
-rq4p l9xtt db,p3 -vm26 ,+c+4 .i0n2 6qec+ u2=s1 n,.0j 47a/- ?xhfk
b8?vo 32k1f 68n8n ,+gvo 32k1b mgz,. 2kxdz w7g*5 d?jq0 5rwh* jia/u
k1*d9 bkf=s fgz4p 7kxtt db8?z ,+i09 lrie- ?7a/q ieyiw ltr=/ q472k
b2=sj 4741+ mctxv y8nwl n26,t nozqi w7/u2 =/q47 y4.u6 8?ljw l9h.u
6895r wltvm 268ro 3c+oh p3c+y ias5z my4.u 6,t*z 4p309 xp?p3 091?1
1n8ro 3c+oh tj4.u 2ohp3 c+u2= s1roz sf,tp t78?f 6,tj4 .u2oh tj8n2
68?z- ruk1? 15.w3 -vqia sf-?x hj8ns 53=/, +mg*l +iwh* n6qey 4.k1b
mc+0j /-vas 1t1f6 ,+cbg vy4.k xzec+ ohtj4 7aas5 *prq0 91*d? vozaw
ln6q0 5rwlx +u6mg db8?v ozas1 b2=sf gvg*z 05r09 h.yiw h?7a/ qieu2
```