

**FREQUENCY DISTRIBUTIONS OF  
ENGLISH TRIGRAPHS**

Frequency distributions of English trigraphs appearing in 50,000 letters of government plaintext telegrams.

Table B-1. The 56 trigraphs appearing 100 or more times, arranged according to their absolute frequencies, accompanied by the logarithms of their assigned probabilities.

F	L <sub>10</sub> (F)	L <sub>586</sub> (F)	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)			
ENT.....	569	2.76	.99	TOP .....	174	2.24	.82	EIG .....	135	2.13	.79
ION.....	260	2.41	.88	NTH .....	171	2.23	.82	FIV .....	135	2.13	.79
AND.....	228	2.36	.86	TWE .....	170	2.23	.82	MEN .....	131	2.12	.78
ING.....	226	2.35	.86	TWO .....	163	2.21	.81	SEV .....	131	2.12	.78
IVE .....	225	2.35	.86	ATI .....	160	2.20	.81	ERS .....	126	2.10	.78
TIO .....	221	2.34	.85	THR.....	158	2.20	.81	UND .....	125	2.10	.78
FOR.....	218	2.34	.85	NTY.....	157	2.20	.81	NET.....	118	2.07	.77
OUR.....	211	2.32	.85	HRE.....	153	2.18	.80	PER .....	115	2.06	.76
THI.....	211	2.32	.85	WEN .....	153	2.18	.80	STA .....	115	2.06	.76
ONE.....	210	2.32	.85	FOU .....	152	2.18	.80	TER .....	115	2.06	.76
NIN .....	207	2.32	.85	ORT .....	146	2.16	.80	EQU.....	114	2.06	.76
STO .....	202	2.31	.84	REE .....	146	2.16	.80	RED.....	113	2.05	.76
EEN.....	196	2.29	.84	SIX .....	146	2.16	.80	TED.....	112	2.05	.76
GHT.....	196	2.29	.84	ASH .....	143	2.16	.80	ERI .....	109	2.04	.76
INE.....	192	2.28	.83	DAS .....	140	2.15	.79	HIR.....	106	2.03	.75
VEN.....	190	2.28	.83	IGH.....	140	2.15	.79	IRT .....	105	2.02	.75
EVE .....	177	2.25	.82	ERE .....	138	2.14	.79	DER .....	101	2.00	.74
EST .....	176	2.25	.82	COM .....	136	2.13	.79	DRE.....	100	2.00	.74
TEE .....	174	2.24	.82	ATE .....	135	2.13	.79				

Table B-2. The 56 trigraphs appearing 100 or more times, arranged in alphabetic order by their first letters, then by absolute frequencies, accompanied by the logarithms of their assigned probabilities.

	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)		F	L <sub>10</sub> (F)	L <sub>586</sub> (F)		F	L <sub>10</sub> (F)	L <sub>586</sub> (F)
AND.....	228	2.36	.86	GHT.....	196	2.29	.84	REE.....	146	2.16	.80
ATI.....	160	2.20	.81	HRE.....	153	2.18	.80	RED.....	113	2.05	.76
ASH.....	143	2.16	.80	HIR.....	106	2.03	.75	STO.....	202	2.31	.84
ATE.....	135	2.13	.79	ION.....	260	2.41	.88	SIX.....	146	2.16	.80
COM.....	136	2.13	.79	ING.....	226	2.35	.86	SEV.....	131	2.12	.78
DAS.....	140	2.15	.79	IVE.....	225	2.35	.86	STA.....	115	2.06	.76
DER.....	101	2.00	.74	INE.....	192	2.28	.83	TIO.....	221	2.34	.85
DRE.....	100	2.00	.74	IGH.....	140	2.15	.79	THI.....	211	2.32	.85
ENT.....	569	2.76	.99	IRT.....	105	2.02	.75	TEE.....	174	2.24	.82
EEN.....	196	2.29	.84	MEN.....	131	2.12	.78	TOP.....	174	2.24	.82
EVE.....	177	2.25	.82	NIN.....	207	2.32	.85	TWE.....	170	2.23	.82
EST.....	176	2.25	.82	NTH.....	171	2.23	.82	TWO.....	162	2.21	.81
ERE.....	138	2.14	.79	NTY.....	157	2.20	.81	THR.....	158	2.20	.81
EIG.....	135	2.13	.79	NET.....	118	2.07	.77	TER.....	115	2.06	.76
ERS.....	126	2.10	.78	OUR.....	211	2.32	.85	TED.....	112	2.05	.76
EQU.....	114	2.06	.76	ONE.....	210	2.32	.85	UND.....	125	2.10	.78
ERI.....	109	2.04	.76	ORT.....	146	2.16	.80	VEN.....	190	2.28	.83
FOR.....	218	2.34	.85	PER.....	115	2.06	.76	WEN.....	153	2.18	.80
FOU.....	152	2.18	.80								
FIV.....	135	2.13	.79								

Table B-3. The 56 trigraphs appearing 100 or more times, arranged in alphabetic order by their second letters, then by absolute frequencies, accompanied by the logarithms of their assigned probabilities.

F	L <sub>10</sub> (F)	L <sub>586</sub> (F)	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)			
DAS .....	140	2.15	.79	SIX .....	146	2.16	.80	ERS .....	126	2.10	.78
EEN .....	196	2.29	.84	EIG .....	135	2.13	.79	ERI .....	109	2.04	.76
VEN .....	190	2.28	.83	FIV .....	135	2.13	.79	IRT .....	105	2.02	.75
TEE .....	174	2.24	.82	HIR .....	106	2.03	.75	DRE .....	100	2.00	.74
WEN .....	153	2.18	.80	ENT .....	569	2.76	.99	EST .....	176	2.25	.82
REE .....	146	2.16	.80	AND .....	228	2.36	.86	ASH .....	143	2.16	.80
MEN .....	131	2.12	.78	ING .....	226	2.35	.86	STO .....	202	2.31	.84
SEV .....	131	2.12	.78	ONE .....	210	2.32	.85	NTH .....	171	2.23	.82
NET .....	118	2.07	.77	INE .....	192	2.28	.83	ATI .....	160	2.20	.81
PER .....	115	2.06	.76	UND .....	125	2.10	.78	NTY .....	157	2.20	.81
TER .....	115	2.06	.76	ION .....	260	2.41	.88	ATE .....	135	2.13	.79
RED .....	113	2.05	.76	FOR .....	218	2.34	.85	STA .....	115	2.06	.76
TED .....	112	2.05	.76	TOP .....	174	2.24	.82	OUR .....	211	2.32	.85
DER .....	101	2.00	.74	FOU .....	152	2.18	.80	IVE .....	225	2.35	.86
IGH .....	140	2.15	.79	COM .....	136	2.13	.79	EVE .....	177	2.25	.82
THI .....	211	2.32	.85	EQU .....	114	2.06	.76	TWE .....	170	2.23	.82
GHT .....	196	2.29	.84	HRE .....	153	2.18	.80	TWO .....	163	2.21	.81
THR .....	158	2.20	.81	ORT .....	146	2.16	.80				
TIO .....	221	2.34	.85	ERE .....	138	2.14	.79				
NIN .....	207	2.32	.85								

Table B-4. The 56 trigraphs appearing 100 or more times, arranged in alphabetic order by their third letters, then by absolute frequencies, accompanied by the logarithms of their assigned probabilities.

F	L <sub>10</sub> (F)	L <sub>586</sub> (F)	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)	F	L <sub>10</sub> (F)	L <sub>586</sub> (F)			
STA .....	115	2.06	.76	THI.....	211	2.32	.85	TER .....	115	2.06	.76
AND.....	228	2.36	.86	ATI.....	160	2.20	.81	HIR.....	106	2.03	.75
UND .....	125	2.10	.78	ERI .....	109	2.04	.76	DER.....	101	2.00	.74
RED.....	113	2.05	.76	COM .....	136	2.13	.79	DAS .....	140	2.15	.79
TED.....	112	2.05	.76	ION.....	260	2.41	.88	ERS .....	126	2.10	.78
IVE.....	225	2.35	.86	NIN .....	207	2.32	.85	ENT.....	569	2.76	.99
ONE.....	210	2.32	.85	EEN .....	196	2.29	.84	GHT.....	196	2.29	.84
INE.....	192	2.28	.83	VEN .....	190	2.28	.83	EST .....	176	2.25	.82
EVE.....	177	2.25	.82	WEN .....	153	2.18	.80	ORT.....	146	2.16	.80
TEE.....	174	2.24	.82	MEN .....	131	2.12	.78	NET.....	118	2.07	.77
TWE.....	170	2.23	.82	TIO.....	221	2.34	.85	IRT.....	105	2.02	.75
HRE.....	153	2.18	.80	STO.....	202	2.31	.84	FOU.....	152	2.18	.80
REE.....	146	2.16	.80	TWO.....	163	2.21	.81	EQU.....	114	2.06	.76
ERE.....	138	2.14	.79	TOP.....	174	2.24	.82	FIV.....	135	2.13	.79
ATE.....	135	2.13	.79	FOR.....	218	2.34	.85	SEV.....	131	2.12	.78
DRE.....	100	2.00	.74	OUR.....	211	2.32	.85	SIX.....	146	2.16	.80
ING.....	226	2.35	.86	THR.....	158	2.20	.81	NTY.....	157	2.20	.81
EIG.....	135	2.13	.79	PER.....	115	2.06	.76				
NTH.....	171	2.23	.82								
ASH.....	143	2.16	.80								
IGH.....	140	2.15	.79								