## National Cipher Challenge 2009, part 5B

## November 1st 1836

Abba aBba aaAa abbA abaa Aaaa aBaa abAb baaB aaab Aaab aAbb baAa abaA baba Abaa aAbb abAa bbaA bbba Baba aBaa abBa abaA abbb Aaaa aBaa abAa baaA aabb Abaa aAbb abBa abbA abaa Baaa bAab aaBa abaB aabb Abaa aAbb abBa abbA abbb Aaba aBab baAb bbaB aaab Abab aAbb baAa babA bbaa Baaa bAaa abAa aaaA aaab Aaaa bAaa aaAa bbaA abaa Aaaa aAbb abAa abbA abbb Abaa aBaa baAb bbbB aaab Abbb aBaa bbAa bbaA bbaa Abaa aBaa baBa abaA babb Abbb aBab abAa baaA babb Aaaa aAaa baAa baaA baaa Baab aAaa aaAa bbbA aaaa Abbb bAbb bbBb aaaA aaba Abaa aBaa abAa abaB abaa Abba aBaa baBa abbA aaaa Abba bAaa baAa baaB aabb Aabb bAaa aaBa abbB abba Aaba aBab baAb bbaB abaa Abab bAaa bbAa aabA abaa Aaba bAbb baAb bbaA babb Abaa aBaa baAa bbbB aabb Abbb aAba aaAa bbaA bbab Abbb aBaa abAa baaA baaa Baba bAab aaBa aabB baaa Abba aBab aaAa abaA abbb Aabb bAbb baAb bbbA abaa Baab bAab bbAa aaaB aabb Babb aAab aaAa abaA aaaa Abba bAab abAb aaaA bbab Aaab bAaa aaBa bbaA aaaa Bbaa aBaa bbAb bbaA abaa Babb bAbb bbAb abbA bbba Abaa aBaa bbAb aaaB aabb Baab bAbb baAb bbaB abaa Baaa bAbb aaBa baaB aabb Baba aAaa aaAb abbA aaaa Aaab bBab abAa aaaA bbab Baab bAaa aaAa bbaA abaa Abaa aBaa bbAb aaaB aaba Abba aAbb baBa aabA abaa Baab bAab bbAa aaaA bbab Aaba bAbb baBa aabB aabb Baba aAbb abAa aaaB aabb Aaba aBaa bbAa bbbA aaaa Baab bBba aaAb bbaB abaa Aaaa aBaa abAa baaA aaaa Abab bBaa abAa baaA aaaa Aaab bBba aaAa aaaA aaba Baaa aBab aaAa aaaA baaa Abba bBaa bbAa baaA aabb Babb aAba aaBa abbA abbb Abba aBba aaBa babA abaa Baaa bBba aaAa bbaA bbba Abbb aAaa bbAa babB aaab Abaa aAab aaAb babA aabb Abba aAbb baAb babB aaba Abaa aAab aaBa baaB aaab Abba aAbb baAb babA abbb Abaa aAab aaBa aabA aaaa Baab aAba aaAa aaaA bbaa Baab aBab aaBa aabA abaa Baab bAab bbAa aaaB aabb Aabb bAab

ааВа	bbaA	baaa	Abab	bAba	bbAb	bbbA	babb	Aaaa	aBba	aaAa	aaaA	baba	Aaba	aBba	aaBa
aabA	bbba	Abab	bAab	aaAb	aaaA	bbab	Aaaa	aAbb	abBb	aaaA	bbbb	Abab	bAaa	aaAb	babB
aaba	Baab	bAab	bbAa	aaaB	aabb	Abba	aAaa	aaBb	aaaA	aabb	Aaba	aBab	abAa	baaA	babb
Abbb	aAbb	bbBb	aaaA	bbba	Baba	aBaa	abAa	abbA	abaa	Baab	aAba	aaAa	bbaA	bbab	Aaba
bAbb	baBa	aabA	aaaa	Abba	bAba	aaAb	baaA	bbbb	Baaa	bAbb	baBa	babA	abaa	Aaab	bAbb
bbAa	aaaB	aaab	Aaaa	aAaa	baAa	bbbB	abaa	Baab	bAab	aaAa	aabA	aaaa	Baab	aAab	aaAa
abbA	bbba	Abba	bBaa	bbAa	bbbA	abaa	Aaab	aAaa	aaAb	abbA	aaba	Baba	aAba	bbAa	aaaB
aabb	Abaa	aAbb	baAb	babB	aaba	Abbb	aAab	abBa	abaA	baaa	Baaa	bAab	baAa	baaA	bbba
Baaa	bAab	baAa	baaA	aaba	Aaaa	aBba	aaAb	abbA	abaa	Bbaa	aAab	bbAa	aaaB	abab	Aaba
aAaa	aaBa	abbB	aabb	Baaa	bAaa	aaAa	abaB	aabb	Aaba	aAaa	bbAa	aaaB	aabb	Baab	bAab
aaAb	babB	aabb	Abaa	aAbb	baAb	babA	baaa	Abba	bBab	baAa	bbbA	baaa	Baab	bAab	aaAa
bbbA	aaaa	Abab	bAba	bbAa	aaaA	bbab	Aaab	bAba	aaAa	aaaA	bbaa	Aabb	bAaa	aaAb	bbbA
bbbb	Bbaa	aBaa	bbAb	bbaA	bbbb	Baaa	bAab	aaBa	abaB	aaba	Baab	bAab	bbAb	bbaB	aaba
Aaba	aBab	baAb	aaaB	aabb	Aabb	bAba	aaAb	babA	abab	Abab	bBab	aaAa	baaA	bbab	Aaab
aAab	aaBa	abbA	bbba	Aaab	aAbb	baAb	babB	aaba	Abaa	aAaa	bbAa	baaB	aaab	Aaba	bBab
aaAb	babA	aabb	Abaa	aAbb	abAa	bbaB	aabb	Aabb	bAab	aaAa	abbA	abaa	Baba	bAab	aaAb
abbA	bbba	Abbb	bAbb	aaAa	baaA	bbab	Baab	bAbb	baAa	babA	baaa	Baab	bAba	aaAa	aaaA
bbaa	Baab	bAbb	baAb	abbA	aabb	Baab	bAab	bbAa	aaaB	aabb	Aaaa	aAbb	abAa	baaA	abab
Aaba	bAab	aaAa	abaB	aabb	Abaa	aBab	abAa	baaA	aabb	Aaba	aAbb	aaAb	bbaA	bbab	Baab
аВаа	bbBa	aabA	aaaa	Baab	bAba	aaAb	bbaA	bbab	Abbb	aAab	abBa	abbA	abbb	Aaba	aAab
aaAb	babA	abbb	Aaaa	aAbb	abAa	abaA	abaa	Aaab	bBaa	baBa	abbA	aaaa	Aaaa	bAba	aaAb
abbA	baaa	Baab	bBba	aaBa	abbA	abbb	Aaaa	aBaa	bbBb	aaaA	bbba	Baba	aBaa	abAa	abbA
abaa	Baab	aAba	aaAa	bbaA	bbab	Baab	aAab	bbAb	bbaB	abaa	Abab	bAaa	bbAb	bbaA	abab
Aaba	bAab	aaBa	aabB	abba	Abbb	aBab	aaAb	abbA	aabb	Aaab	bAbb	baAb	baaB	abaa	Aaab

aAab	bbBa	abbA	bbba	Abaa	aAbb	aaAb	bbbB	aaab	Abbb	aBab	abAa	baaB	aabb	Aabb	bAab
aaAa	abaA	abbb	Aaaa	aAbb	abAa	abaA	abaa	Baab	aBaa	bbAa	bbbA	aaaa	Baab	bAba	aaBa
abbB	abba	Abbb	aBab	aaAb	abbA	aabb	Aaaa	bAab	aaAa	aaaA	aabb	Abbb	aAbb	bbBa	abbA
abaa	Aaab	bAaa	abBb	aaaA	bbaa	Aaaa	aAbb	abBa	baaA	abab	Aaaa	aAaa	baBa	abbB	abaa
Baaa	bAab	aaBa	aabB	aaba	Abbb	aAab	abAb	baaA	baaa	Abab	bAba	aaBa	abbA	aaaa	Baaa
bBba	aaAa	bbbA	aaaa	Baaa	bAaa	bbBa	bbaA	aaaa	Baaa	bAab	aaAa	aaaB	aaba	Bbaa	aAbb
baBa	baaA	bbaa	Aaaa	aBba	aaAb	abaA	bbab	Abbb	aBab	baBa	abbA	abbb	Aaba	aAbb	abAa
aaaB	aaba	Aaab	aAab	aaAb	babB	aabb	Abbb	bAbb	baBa	abaB	aaba	Abaa	aAaa	abAb	aaaA
babb	Abaa	aBaa	bbAb	aaaA	abaa	Baab	aAbb	bbBa	aabA	abaa	Baab	aAab	aaAb	babB	aabb
Aaba	aAaa	bbAa	aabB	baaa	Baab	bAab	bbAa	baaA	abbb	Abbb	aBaa	bbAa	aaaA	baaa	Baaa
bAaa	abAa	aaaA	babb	Abab	bAbb	baAb	bbaA	bbab	Abaa	aAbb	abBa	abbA	aaaa	Abab	aAba
aaAb	babA	abba	Babb	aAaa	aaBa	aabA	abab	Aaaa	аВаа	abAa	baaA	baaa	Abba	bBaa	bbAb
bbaB	aabb	Aabb	bAab	aaBa	abaA	baba	Abaa	aAab	aaBa	abaA	aaaa	Baaa	bAab	aaAb	aaaA
bbab	Aabb	bAba	aaAa	aabA	baaa	Baab	bAab	aaAa	abbA	aaab	Bbaa	aBaa	bbAa	bbbA	abaa
Abab	bAaa	aaAa	abaA	baba	Abbb	aAab	abAa	aaaB	aaba	Baba	aAba	aaBa	abbA	aaaa	Aaaa
bAba	bbAa	baaA	bbaa	Aaba	aBaa	bbAa	bbbA	bbba	Aaab	bAbb	baAa	babA	abaa	Baab	aAaa
baAa	aaaA	bbbb	Aaba	aAaa	aaAb	babA	aabb	Baab	bAab	bbAa	baaA	abba	Aaba	aAbb	abAa
baaB	aaab	Aaaa	aAba	bbBa	abaB	abba	Abaa	aAba	bbAb	abbB	aaab	Aaba	аВаа	aaBa	baaA
baaa	Baaa	bAab	aaBa	abaA	bbba	Abba	aAab	aaAa	abaA	bbba	Abba	bBab	abAb	aaaA	bbab
Aaab	aAba	aaAb	babA	abba	Abaa	aAab	abBa	bbaA	abaa	Aaaa	aBaa	abAa	baaB	aabb	Abbb
aAbb	bbAa	baaB	aaab	Baab	aBab	aaAa	aaaA	aabb	Aaba	аВаа	bbAa	bbbA	abaa	Abba	aAbb
baAa	babB	aabb	Aabb	bAab	aaBa	baaB	aabb	Abaa	aAba	bbAb	aaaB	aabb	Bbaa	aAbb	baAa
babB	aaba	Baba	aAaa	baAa	bbbA	aaaa	Aaab	bAab	aaBa	babA	baaa	Aaab	aAab	aaBb	aaaA
bbba	Baba	aAbb	aaAa	baaA	bbab	Baab	bAba	aaAb	bbaA	bbab	Aaba	aAaa	bbBa	abbA	abbb

Aaaa	аВаа	bbBb	aaaA	bbba	Baba	aAaa	abAa	baaA	babb	Abaa	aAab	ааВа	babA	abaa	Abba
аВаа	abAa	aabA	aaaa	Aaaa	bAaa	abAa	aaaA	abba	Aaba	аВаа	bbAb	bbaA	aaab	Aaba	aBab
baAk	bbaB	aaab	Abab	aAba	aaAb	babA	abba	Abbb	aAbb	abAa	aaaA	bbab	Aaba	aBab	baAa
aaaA	bbab	Aaab	bBaa	baAa	baaA	aaba	Baaa	bAab	aaBa	abbA	bbaa	Aaaa	aAaa	baAa	bbbA
baaa	Abba	bAab	aaAb	aaaB	aabb	Babb	aAbb	baBa	baaA	babb	Aaab	bAbb	baAa	babA	aaba
Abbb	aBab	aaBa	aabB	aaba	Aaba	aAaa	abAa	baaA	bbba	Aaba	bAab	baBa	aabA	abaa	Aaaa
аВаа	bbAb	aaaA	bbab	Baab	bAab	aaBa	aabA	abaa	Baab	aBaa	bbBa	abbA	bbba	Abba	aAab
aaBa	abbA	bbba	Abab	aAbb	abAb	bbaB	abba	Babb	aAab	bbAa	aaaB	aabb	Baab	bAab	bbAb
aaaE	aaba	Aaab	bAab	aaBa	babA	baaa	Aaab	aAab	aaAb	baaA	baaa	Aabb	aAab	bbBa	abbA
aaak	Aaba	aAaa	aaBa	abaB	baaa	Abbb	aBab	aaAb	abaA	bbab	Abbb	aBab	baAb	aaaA	aaaa
Abba	aAaa	aaAa	bbaB	aaab	Aaba	aAaa	aaBa	abbB	aaba	Baba	aAbb	bbAb	bbbA	bbba	Baaa
bBaa	bbAa	baaB	aaab	Abbb	aAab	abAa	bbbA	baaa	Baab	aBab	baAb	bbaB	aaab	Abab	aAba
aaAb	babA	abba	Abbb	aBab	abAa	baaB	aaab	Abba	bAbb	aaAa	baaA	bbab	Baab	bAaa	aaAb
babA	aabb	Abaa	aBab	baAb	bbaB	abaa	Abab	bAaa	bbAa	aabA	abaa	Abbb	bAba	bbAa	baaA
aaaa	Baab	aAab	aaAa	abbB	aabb	Abbb	aAbb	bbBa	aabA	abaa	Baab	aBaa	baAa	bbbA	baaa
Baak	aAaa	baAa	aaaB	aaba	Aaba	aAab	abAb	bbaB	aaab	Aaaa	aAaa	bbAa	abbA	baaa	Baab
bAba	aaAb	bbaA	bbab	Aaaa	aAba	bbBa	abaB	abaa	Abbb	bAbb	bbAb	bbaB	aaab	Baab	bBab
baAa	bbbA	baaa	Abab	bAab	aaAa	aaaA	aaba	Baab	bAba	aaAb	babA	abba	Abbb	aAbb	abBb
aaaA	bbba	Baba	aBaa	abAa	aabA	abaa	Aabb	bAaa	aaAb	abbA	abab	Aaaa	aBaa	baBa	bbaA
abaa	Abab	bAba	bbAb	aaaA	abbb	Abbb	aAbb	bbAa	baaB	baaa	Abbb	aBab	aaBa	bbaA	baaa
Abak	bAba	bbAa	abaA	bbba	Abba	bBaa	baAb	aaaA	aabb	Aaba	aBaa	abBa	abbA	abbb	Abaa
аВаа	. baAa	aaaB	aaba	Aaaa	aAbb	abAa	baaB	abbb	Aaab	aAab	aaAb	abbA	babb	Aaba	aAbb
abBa	abbA	bbba	Abbb	bAbb	bbAb	bbaB	aaab	Baab	bBab	aaAb	babA	baaa	Baab	bBba	ааВа
abbA	bbba	Aaba	aAbb	abAa	bbbA	aaaa	Abba	bAaa	baAa	baaA	bbba	Baba	aBaa	abAa	aaaA

## Register for the competition on the form at http://www.cipher.maths.soton.ac.uk/registration

babb	Baaa	bAab	aaAa	aaaA	aabb	Bbaa	aAab	abBa	aabB	abaa	Abaa	аВаа	bbAa	babB	abaa
Abab	bAaa	baAb	bbaA	bbba	Abbb	bAab	aaBa	aabA	aaaa	Baab	bAba	aaAb	bbaA	bbab	Bbaa
aAbb	baBa	baaB	aaab	Aabb	aAbb	baAb	bbaA	aabb	Aaba	bBaa	abAb	aaaA	abaa	Abba	bAaa
bbAb	abbA	bbba	Baaa	bAaa	bbAb	bbbA	abaa	Abba	bAbb	abBb	aaaA	babb	Aaaa	aAba	aaAb
babA	abaa	Abbb	bBaa	baAb	aaaA	bbaa	Baba	aBaa	baBa	abbA	aaaa	Abbb	bAbb	baAb	abbA
bbba	Aabb	aAba	aaBa	abaA	abaa	Aaba	bAbb	baBa	aabA	bbaa	Bbaa	aBaa	bbAa	aaaB	aaab
Aaab	bAba	aaAb	babA	abaa	Baab	aBaa	baAb	aaaA	bbab	Baaa	bAab	aaAb	baaA	baaa	Baab
bBaa	bbAb	aaaA	bbab	Aabb	aBaa	bbAa	bbbA	abaa	Abbb	bAaa	aaBb	aaaA	bbaa	Aaba	aAbb
abBa	abbA	abab	Abbb	aBaa	abBa	abbA	abbb	Aaba	aAaa	abAa	baaA	aaaa	Baba	аВаа	bbAb
aaaA	abab	Baba	aAba	bbBa	bbaA	aaaa	Baab	bAab	aaBa	aabA	aaba	Abbb	aAba	bbAb	bbaB
abaa	Baaa	bAbb	bbAa	aaaA	baaa	Abba	bBaa	bbAb	aaaA	bbab	Aabb	aAbb	baAa	babA	bbaa
Bbaa	aAbb	abAb	aaaA	abaa	Aaab	aAab	aaAa	aaaA	bbab	Baba	aAbb	abAa	baaB	abbb	Abbb
bAab	aaAa	abaB	aabb	Aaba	aAaa	bbAa	abaA	babb	Aaaa	aAba	aaAb	baaA	bbba	Abba	bAbb
aaBb	aaaA	aabb	Abaa	aBaa	baAb	bbbA	bbba	Baab	aAaa	aaAa	aabA	babb	Aaba	aAab	abBa
baaA	bbab	Aaab	bBaa	baAb	bbbA	babb	Aaaa	aAaa	baAa	baaB	aaba	Abba	aAab	aaAb	aaaA
bbab	Baab	bAab	aaAb	baaA	bbbb	Abbb	aBaa	abAa	aaaB	aaab	Bbaa	aAab	aaAb	baaA	aaab
Aaaa	aBaa	abBa	aabA	aaaa	Baab	aBaa	baAb	baaA	abaa	Abba	bBaa	bbAa	aabA	abaa	Aaaa
аВаа	baBa	abaB	abaa	Baaa	bAab	aaAa	abbB	aabb	Aabb	bAaa	aaBa	abbA	baaa	Babb	aAba
aaAb	abbA	babb	Baaa	bAab	aaAa	abaB	aabb	Abaa	aAab	abBb	aaaB	aabb	Aabb	bAba	aaBa
abaA	aaaa	Baab	bBaa	bbAa	bbbA	abaa	Aaba	aAaa	aaBa	aabA	babb	Abaa	aAab	aaBa	abaB
aabb	Abbb	aAbb	bbAb	bbbA	bbba	Baaa	bBaa	bbBa	baaA	bbab	Abaa	аВаа	bbBb	aaa	