aa = b
aaa = b
a = bbb
a = b
a = bb
a = ba
a = ab
aab = bb
aaa = ba
aaa = ab
a = bab
aba = bb
ab = ba
aa = bbb
aba = b
aaa = bb
abb = baa
aba = bbb
aba = bab
aab = bba
aaa = bbb
aaa = bab
aa = bb
aa = ab
aa = ba
ab = bb
aa = bba
aa = bab
aa = abb
ab = bbb
ab = b
a = aa
aa = baa
a = bba
ab = bab
aa = aba
ab = abb
aa = aab
a = abb
aba = baa
aab = aba
aab = baa
abb = bba
aaa = abb
aaa = bba
aaa = aab
aab = bbb
aba = abb
aaa = aba
aaa = baa
aab = abb
aab = bab
aba = bba
abb = bbb
abb = bab
abb = bb
aba = ba
aab = b
aab = ab
a = aaa
aa = aaa