

Taxon	Character 1	Character 2	Character 3
Taxon 1	0	1	1
Taxon 2	0	1	0
Taxon 3	1	0	0
Taxon 4	1	0	1

**a** Character Likelihood ( $L_i$ ) = Pr( observed character | Tree, branch lengths, rate of character state change )

**b** Character Likelihood ( $L_i$ ) = Pr( data | model )

**c** Total Likelihood (L) =  $L_1 + L_2 + L_3$