BM25 formula (Robertson and Sparck-Jones, 1976)

$$w_{i,j} = \frac{tf_{i,j} \log(\frac{N - df_i + 0.5}{dfi + 0.5})}{k_1 \times ((1-b) + b\frac{dl}{avdl}) + tf_{i,j}}$$

N = number of documents in the collection

$tf_{i,j}$ = frequency of term i id document j

df_i = number of documents that contain term j

dl = length of document j

avdl = average length over documents

k1 and b are parameters

- Can use this weight in Vector Space Model