Exercise Solutions

Count of counts:

Word frequency, c	# word types, f_c
1	3 (soccer, mother, tops)
2	2 (camp, frock)
3	1 (pass)
4	0
5	1 (ship)

N = 3 + 2 * 2 + 1 * 3 + 1 * 5 = 15

P(UNK) = f_1 /N = 3/15

P(soccer) = c_1^* /N = (2 * f_2 / f_1) / N = (4/3)/15 = 4/45

P(camp) = c_2^* /N = (3 * f_3 / f_2) / N = (3/2)/15 = 1/10

P(pass) = c_3^* /N = (4 * f_4 / f_3) / N = (4 * 0)/15 = 0