

$$k = 4, N = 400$$

	<i>Levels of Categorical Variable (k)</i>			
	1	2	3	4
f_e	100	100	100	—

$$k = 8, N = 400$$

	<i>Levels of Categorical Variable (k)</i>							
	1	2	3	4	5	6	7	8
f_e	50	50	50	50	50	50	50	—

The expected frequency at each level of the categorical variable is free to vary except one because the last level must make the total expected frequency equal 400 (the total number of participants observed).