χ^2 Goodness of Fit Test

We perform a χ^2 - test: Goodness of Fit (GOF-test) in Excel.

At a municipal election the votes was distributed like this:

Party	Soc.	Rad.	Kons.	SF	DF	Venstre	Total
%	26.2	5.8	11.8	13.1	14.2	28.9	100

Shortly before the next election 920 persons responded on a opinion survey.
The question was: "Who would you vote on, if there was selection tomorrow?"
The answers was distributed like this:

Party	Soc.	Rad.	Kons.	SF	DF	Venstre	Total
Number	258	56	89	133	112	272	920

Assume the Null Hypothesis: The distribution is unchanged compared to the selection.

a. Calculate a table with an expected number of votes under the Null Hypothesis.

b. Calculate the critical value k, the test χ^2 , and the probability p .

c. Determine on the level of significance 5 % , whether the Null Hypothesis must be rejected.

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