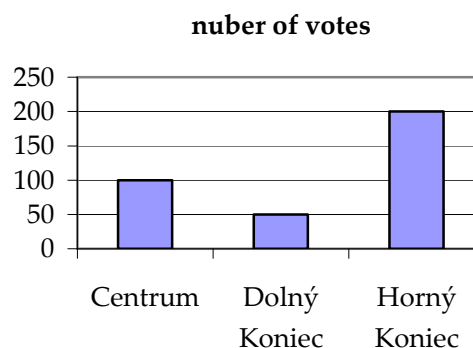
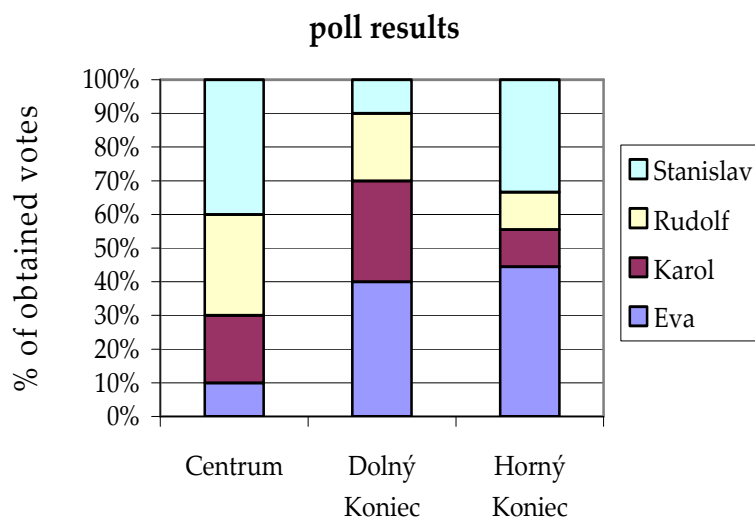


LOCAL ELECTION

In four months there will be local election for a mayor in Nová Ves town. There are 4 candidates.

Two diagrams show the results of a public survey. In the first one you can see an estimated percentage of the results of the polls in three different districts of the town, in the second one you can see an estimated number of votes in these districts.



Excercise 1: Which district of the town would get the highest number of votes according to the survey?

Answer:

Excercise 2: What percentage of the vote would Rudolf obtain in the Centrum district of the town?

Answer:

Excercise 3: How many votes (not the percentage) would Eva obtain in the Horný koniec district of the town?

Answer:



Excercise 4: By how many votes less would Stanislav obtain than Eva in the Horný koniec town district?

Answer:

Excercise 5: Who would win the election according to the survey? Write down your calculation.

Calculation:

Answer:

Two months before the election a new public survey was done. Only three candidates were considered this time as Rudolf had given up his nomination because of the results of the previous survey. The expected results of a new survey are shown in the table, distribution of the votes among the candidates in the three districts of the town. So, e.g. Stanislav would obtain 40% , Karol 20% and Eva 40% of all eligible votes in Centrum town district.

Candidate \ District	Centrum	Dolný koniec	Horný koniec
Stanislav	40 %	30 %	45 %
Karol	20 %	35 %	45 %
Eva	40 %	35 %	10 %



Imagine that

- the new survey will become true
- voters will give 800 votes
- the number of votes will not be smaller than 50 in any of the districts of the town

Excercise 6: Show that in that case the number of all valid votes in the Dolny koniec district must be a multiple of 20.

Explanation:

Excercise 7: It seems that according to the survey Stanislav is a univocal favorite. However, it needn't be true: the result depends on the number of votes handed in each district. Show that 800 votes can be distributed among the districts in such a way that Karol can be the winner.

- In your answer write to the table suggested number of valid votes in each district for each candidate.
- Provide calculation showing that, when you proposed the allocation of votes certainly wins Karol.

Answer:

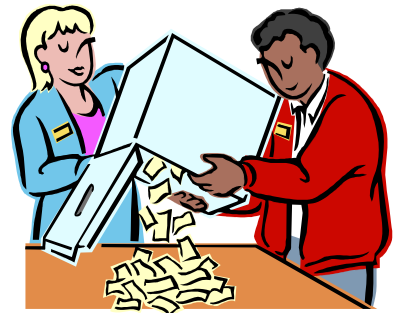
	Centrum	Dolný koniec	Horný koniec
total value of votes in district			
Stanislav	40 % =	30 % =	45 % =
Karol	20 % =	35 % =	45 % =
Eva	40 % =	35 % =	10 % =

Calculation:

Excercise 8: Equally it might seem that Eva has no chance to win. Find out if it is really true. So, the question now is:

Is it possible to distribute 800 votes among the districts in such a way that Eva could win?

Circle the correct answer.



Answer: yes no

Reasons:

