

Population Estimates 2018 Exercise

Data: popestimates_2018.xlsx

Source: U.S. Census Bureau annual county-level estimates

This shows the estimated total population in each county in the U.S. in each year since 2010. Each county is identified by the state, census division and census region it is located in.

- 1) Turn on filters and look at the values that are listed in the region, division and state columns to get a better idea of what's in those columns.
- 2) Filter the data to only Minnesota records. Which division is Minnesota located in?
- 3) Unfilter your data (or turn off the filters altogether) and add a new column on the right. Label it as "PctChange2010_2018". Then calculate the percentage change between 2010 and 2018. Be sure to copy your formula down the entire page.
- 4) Sort the worksheet by your new column to find out which county grew the most. While it's still sorted that way, turn you filter back on and select Minnesota again. Then you should be able to see which county in Minnesota grew the most. Which one was it? And did any counties in Minnesota lose population?
- 5) Turn off the filters. Add another new column and calculate the percentage change from 2017 to 2018. Which county in the U.S. grew the most in that one year?
- 6) Next, let's summarize this data to higher levels. Instead of just looking at the county level, let's see what's happening at the state level. To do this, we need to add together all the populations from each county in each state to come up with grand totals. Start a PivotTable and put the State (STNAME) in the rows box. Then put the PopEstimate2017 and PopEstimate2018 in the values box. Both of them should say "Sum of..." (If they don't, click on it and choose "value field settings" and change it to Sum)
- 7) Next you'll need to copy this to a new worksheet in order to do the percent change calculations. However, only highlight and copy the WHITE areas (don't take the blue headers). Paste this into a new worksheet, then add the headers back. You should have 3 columns – the state, the 2017 population and the 2018 population.
- 8) In that new table, add a new column and calculate the percentage change from 2017 to 2018. Sort the table to see which state grew the most? And did any states lose population?
- 9) Add a new row below your table (leave a blank space, though) and create a U.S. total. Use the SUM function to add all the values from the 2017 population column and then repeat that for the 2018 population column. What was the percentage change for the U.S.?

10) How would you characterize Minnesota's population change compared to the U.S.? (similar? Slower? Faster?) Try writing a sentence to that effect.

11) Repeat steps 7 through 9 but instead of using state, use the Division field. (remember which division Minnesota is in?). Then how would you characterize the growth of the division that Minnesota is in compared to the other divisions?

12) Repeat steps 7 through 9 and this time use the Census Region. How would you characterize the population change in the Midwest compared to the other regions?