Practice: Analyzing population change

Let's put some Excel formulas to work by looking at the world's largest cities and their population over time. UrbanPop.xls contains data from the United Nations, Department of Economic and Social Affairs, Population Division and contains population from 1950 – 2030 for cities of 300,000 or more.

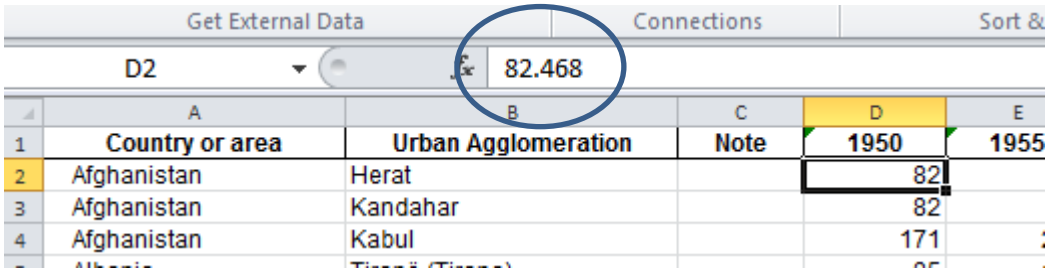
Please keep in mind that this is practice data and should not be used for actual stories. If you're interested in looking at the "real" data you can access it here from the United Nations.

First open the spreadsheet and do the following steps before starting your analysis.

1. Make a copy
2. Four corners test
3. Check the math

On your four corners test you'll notice that we have quite a bit of information – population figures and estimates for 1,692 cities throughout the world. What else do you notice? The "Notes" column is interesting and is filled in with numbers for many cities. Often data will contain a lot of codes and numbers that have definitions you must look at to get the full picture of the data. Click on the sheet labeled "NOTES" at the bottom of the screen. This spreadsheet contains a lot of notes that offer insights into the different cities and population figures. They can be useful and should be looked at when working with the data.

You also might notice that the numbers are smaller than you'd think they should be. That's because they are in 1,000's. For example, the urban agglomeration of Herat, Afghanistan shows "82" in 1950. If you click in the cell for that number at look to the formula bar, you'll notice that the number is actually 82.468. The format of the columns doesn't include decimals so Excel is rounding the numbers to the nearest whole number. Excel still does all of the math using the full number, but our eyes only see the rounded ones. The actual population is 82.468 multiplied by 1,000 or 82,468.



	A	B	C	D	E
1	Country or area	Urban Agglomeration	Note	1950	1955
2	Afghanistan	Herat		82	
3	Afghanistan	Kandahar		82	
4	Afghanistan	Kabul		171	

There's a large amount of information here so it might be helpful to spend some time just looking at it. What might be interesting? What questions do you have for the data? Write those down and use them to help drive your analysis. If you need some inspiration to get you going, work through the questions below.

PRACTICE QUESTIONS

1) Which urban agglomeration was the largest in 1950? Which is expected to be the largest in 2030?
2) Are any urban agglomerations expected to lose population from 2010 to 2030? If so, how many and which one is expected to lose the most? Is there anything interesting you notice about these results? (Note: look at change and percent change.)
3) Which United States urban agglomeration is expected to have the largest percent increase from 2015 to 2030?

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