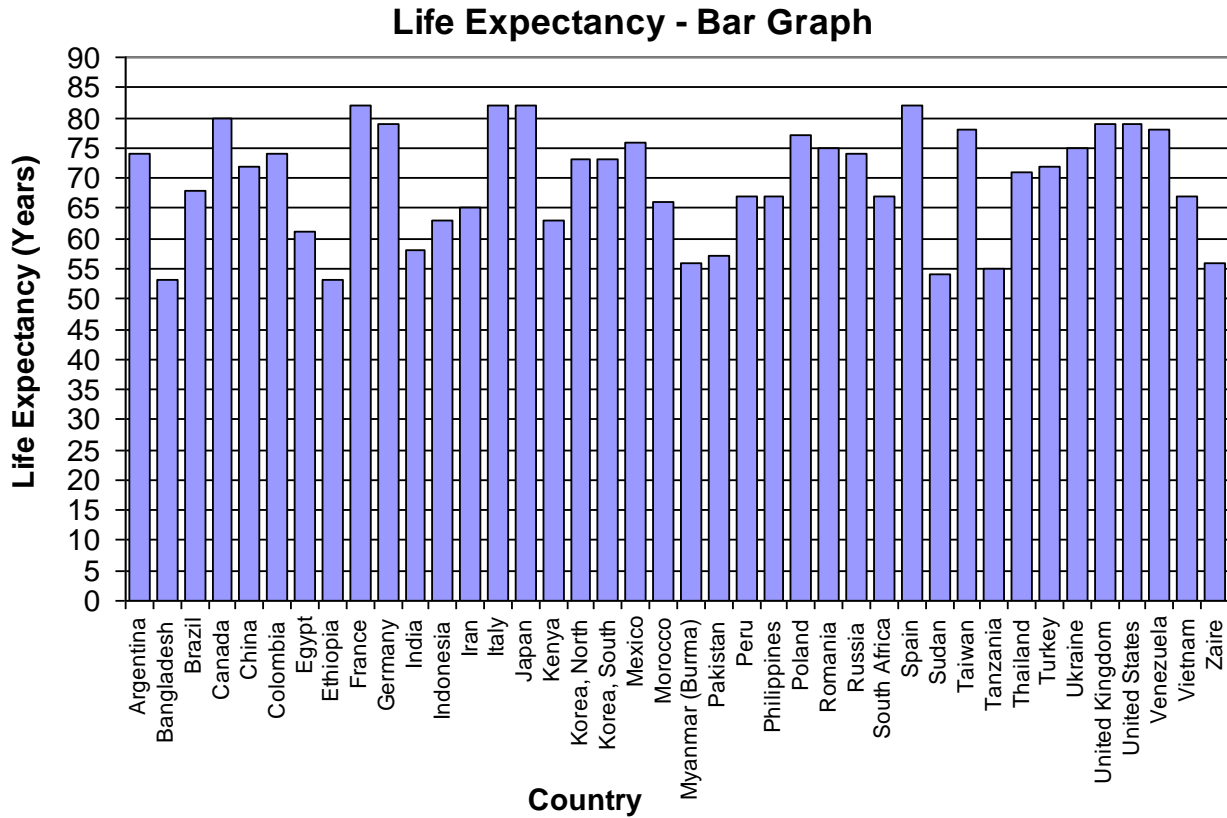


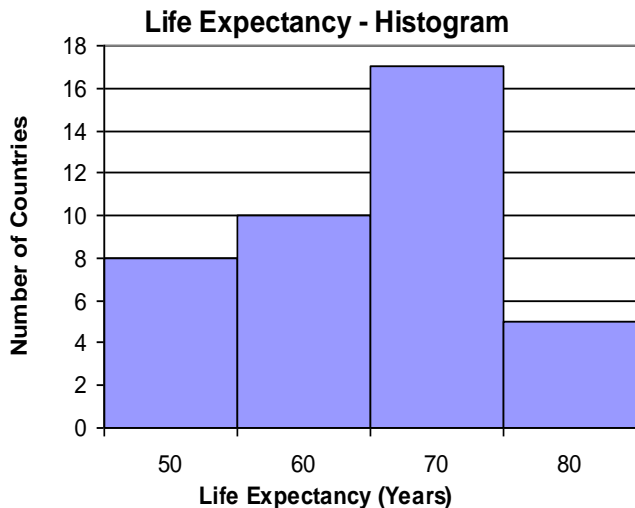
Name: _____ Date: _____ Period: _____

Bar Graphs versus Histograms

The following BAR GRAPH shows the life expectancy for females in a variety of countries. Notice how the x-axis has lists categories - each bar is a separate country.



The same data can be made into a HISTOGRAM if we put numeric data along the x-axis. The y-axis would show the number of countries whose females life expectancy fall in each of the age ranges given on the x-axis. It summarizes the set of data into a small graph. We lose the more specific information about each country in order to get a quick picture of all of the countries.



Each age range shows the same amount of years. Since the ending point of one bar is the starting point of the next, the bars do not need to include the ending age.

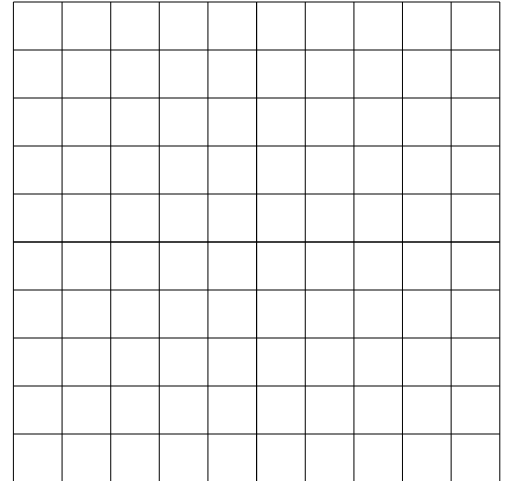
The first bar includes countries with life expectancies of 50-59 years *or* 50 years and up to (but not including) 60 years.

How can we tell that the two graphs show the same number of countries?

1. The data set below is the actual life expectancy of women for these forty countries - with ages sorted from least to greatest.

53	56	63	67	72	74	78	80
53	57	65	67	73	75	78	82
54	58	66	68	73	75	79	82
55	61	67	71	74	76	79	82
56	63	67	72	74	77	79	82

- a. Make a new histogram, but change the first bin width to 50-54 years. Be sure to choose an appropriate scale & label the axes!
- b. Compare this histogram to the first one. Does changing the bin size change the graph?



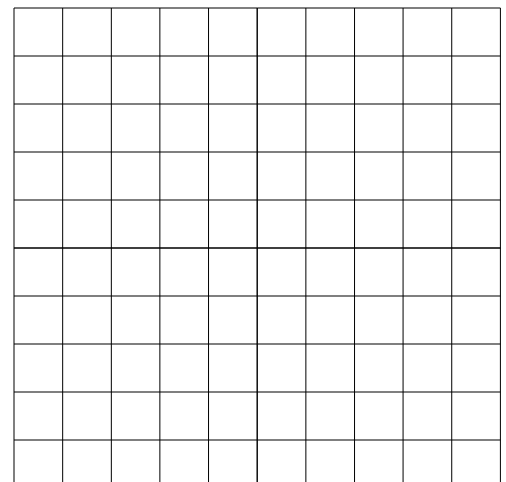
2. The data set below is the life expectancy for males from these same forty countries. Let's compare them to the females! (Use the same scale as in #1)

67	68	57	59	58	69	72	73
55	60	59	67	56	79	50	72
62	50	64	67	62	61	66	71
73	74	75	68	62	75	68	63
68	73	76	63	69	52	70	52

- a. Since the data is not sorted, start by making a frequency distribution. Make a tally mark for each country that fits in the ages shown.
- b. Now use the frequency distribution to make a histogram.

b.

Life Expectancy	Number of Countries
50-54	
55-59	



- c. Which gender seems to live longer? Explain your answer.