

Are We Closing the Gender Gap in Earned Wages?



In this project, you are a reporter whose job is to display trends in men's and women's earnings in a particular country. You will then analyze these trends to make future predictions about the gender gap in men's and women's earnings. Your finished product will be *a newsletter, article, poster, or television report (video)* that includes all of the above.



- 1) Look at data about men's and women's earnings in either the U.S. (½ the class) or Canada (½ the class). Choose which country you'd like to write about, or ask the teacher if you want to do a different country of your choosing.
- 2) Choose at least 10 relevant data points from the data, and display your data in a clear table, like in the exemplar. Make sure to cite your source(s).
- 3) Create a beautiful graph (by hand) that clearly represents the data and that will help your reader make sense of the data. Include in your graph:
 - A title
 - Axes labeled with clear, specific variable values and appropriate scales (you will want your x-axis to be labeled "years since _____", so you can start at 0)
 - Points plotted clearly – use different colors for men and women
 - A line of best fit drawn for the men's data, and a separate line of best fit drawn for the women's data
 - Label the line of best fit with its equation ($y = mx + b$)
- 4) Analyze your data and graph by considering the following questions. You can answer these in Q/A format, in a paragraph, as bullet points or balloon facts, or in any other appropriate format that you wish. Try to write about these points as a reporter would – i.e., you wouldn't read "the slope of this line is ____" in a newspaper article...right?
 - What is the y-intercept of each line and what does this value represent?
 - What is the slope of each line and what does this value represent?
 - What do the slopes show about men's and women's earnings?
 - Will your two lines intersect at some point? What is this point? What is the meaning of this point and why is it relevant?
 - How did you find the point of intersection? (clearly explain your solving method, using the equations – you can just be a math student for this one, rather than a reporter). Also, confirm your solution by using another method to find the intersection point.
- 5) Analyze the CONTEXT. Who might be interested in this data, and its analysis and why?

You will work individually for this project. It is due on WEDNESDAY, SEPT 14.

Read the rubric and score your own project before you turn it in, so that you are confident that you have met all the expectations.

Possible Data for your *Gender Gap in Earned Wages* article

| YEAR | US Men's Mean Wages | | US Women's Mean Wages | |
|-----------|---------------------|--------------|-----------------------|--------------|
| | Current dollars | 2009 dollars | Current dollars | 2009 dollars |
| 2009 (36) | 62,402 | 62,402 | 44,873 | 44,873 |
| 2008 | 61,741 | 61,507 | 43,275 | 43,111 |
| 2007 | 58,335 | 60,347 | 42,195 | 43,650 |
| 2006 | 57,745 | 61,431 | 41,495 | 44,144 |
| 2005 | 56,143 | 61,685 | 39,034 | 42,887 |
| 2004 (35) | 53,993 | 61,311 | 37,837 | 42,966 |
| 2003 | 53,009 | 61,821 | 37,182 | 43,363 |
| 2002 | 52,396 | 62,471 | 35,842 | 42,734 |
| 2001 | 51,535 | 62,437 | 35,370 | 42,852 |
| 2000 (30) | 50,206 | 62,534 | 32,917 | 41,000 |
| 1999 (29) | 47,409 | 61,029 | 31,116 | 40,055 |
| 1998 | 44,866 | 58,960 | 30,660 | 40,292 |
| 1997 | 43,678 | 58,200 | 29,244 | 38,967 |
| 1996 | 42,049 | 57,240 | 28,355 | 38,599 |
| 1995 (25) | 40,359 | 56,402 | 26,531 | 37,077 |
| 1994 (24) | 39,264 | 56,193 | 26,272 | 37,600 |
| 1993 (23) | 38,027 | 55,585 | 25,303 | 36,986 |
| 1992 (22) | 35,474 | 53,135 | 23,930 | 35,844 |
| 1991 | 34,354 | 52,762 | 22,949 | 35,246 |
| 1990 | 33,334 | 53,031 | 21,977 | 34,963 |
| 1989 | 33,010 | 55,133 | 21,039 | 35,139 |
| 1988 | 31,093 | 54,172 | 19,854 | 34,591 |
| 1987 (21) | 29,918 | 54,038 | 18,856 | 34,058 |
| 1986 | 28,777 | 53,733 | 17,900 | 33,423 |
| 1985 (20) | 27,414 | 52,115 | 17,028 | 32,371 |
| 1984 | 25,861 | 50,850 | 16,030 | 31,520 |
| 1983 (19) | 24,594 | 50,339 | 15,157 | 31,023 |
| 1982 | 23,637 | 50,445 | 14,327 | 30,576 |
| 1981 | 22,196 | 50,228 | 13,112 | 29,672 |
| 1980 | 20,521 | 50,858 | 12,038 | 29,835 |
| 1979 (18) | 19,078 | 52,531 | 10,863 | 29,911 |
| 1978 | 17,526 | 52,880 | 9,929 | 29,958 |
| 1977 | 16,149 | 52,067 | 9,126 | 29,424 |
| 1976 (17) | 15,004 | 51,428 | 8,598 | 29,471 |
| 1975 (16) | 14,029 | 50,853 | 7,930 | 28,745 |
| 1974 (15) | 13,145 | 51,565 | 7,383 | 28,962 |
| 1973 | 12,104 | 52,230 | 6,661 | 28,743 |
| 1972 (14) | 11,304 | 51,831 | 6,287 | 28,827 |
| 1971 (13) | 10,395 | 49,092 | 5,900 | 27,864 |
| 1970 | 9,918 | 48,892 | 5,675 | 27,975 |
| 1969 | 9,346 | 48,341 | 5,230 | 27,052 |
| 1968 | 8,437 | 45,586 | 4,577 | 24,730 |
| 1967 (12) | 7,863 | 44,151 | 4,333 | 24,330 |

Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements.
<http://www.census.gov/hhes/www/income/data/historical/people/index.html>

Average earnings by sex and work pattern - Canada
(Full-time workers)
Full-year, full-time workers

| Year | | | Earnings ratio |
|------|------------------|--------|----------------|
| | Women | Men | |
| | \$ constant 2009 | | % |
| 2000 | 40,300 | 57,000 | 70.6 |
| 2001 | 40,700 | 58,200 | 69.9 |
| 2002 | 40,900 | 58,300 | 70.2 |
| 2003 | 40,800 | 58,100 | 70.2 |
| 2004 | 42,100 | 60,000 | 70.1 |
| 2005 | 41,900 | 59,500 | 70.5 |
| 2006 | 43,300 | 60,200 | 71.9 |
| 2007 | 44,200 | 61,800 | 71.4 |
| 2008 | 44,800 | 62,800 | 71.3 |
| 2009 | 46,400 | 62,200 | 74.6 |

Note: Data before 1996 are drawn from Survey of Consumer Finances (SCF) and data since 1996 are taken from the Survey of Labour and Income Dynamics (SLID).

Source: Statistics Canada, CANSIM, table (for fee) [202-0102](#).

Last modified: 2011-06-15.

<http://www40.statcan.gc.ca/l01/cst01/labor01b-eng.htm>

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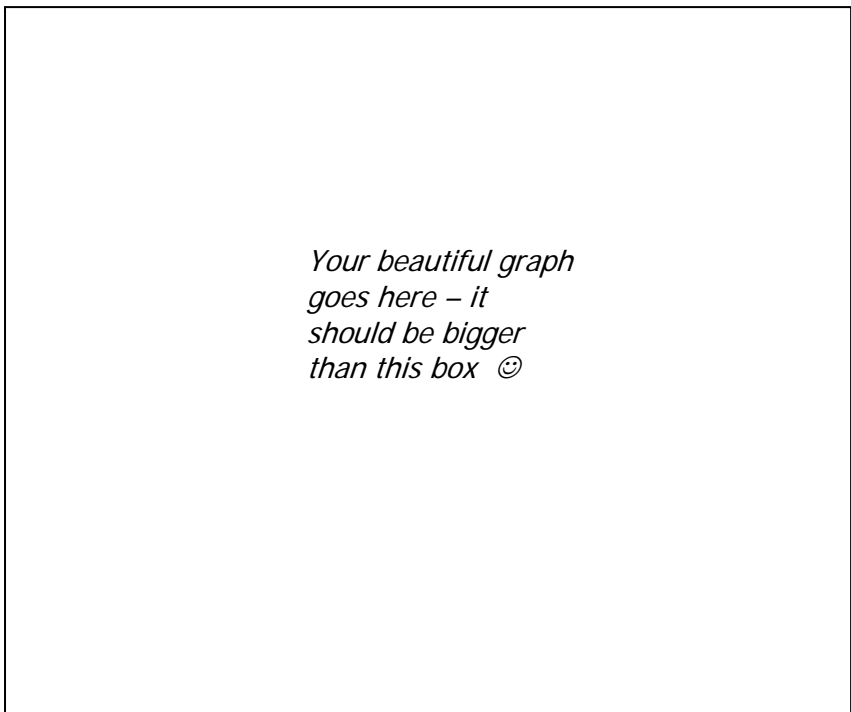
Wahn Fine Stoodent, Block Z, August 6, 2011

In many countries around the world, there is a disparity between men's and women's earnings. In the United States, for example, men currently earn more than women. It appears, however, that this gender gap may close at some point in the future. Consider the following data, obtained from _____ (cite your source here) _____:

| Year | Men's Average Earnings (in 2009 dollars) | Women's Average Earnings (in 2009 dollars) |
|------|--|--|
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In your table, include at least 10 relevant data points that you will then plot on your graph

The above data is perhaps easier to interpret when viewed on a graph:



As you can see in the graph, men earned _____ and women earned _____ in the year _____, the first year that the data was available for the U.S. Women's earnings have increased at an average rate of about _____ since the year _____ though, while men's earnings... (continue your awesome analysis here).

You can also see in the graph that the two lines intersect at the point (____,____), which means... (continue your awesome analysis here).

We can also find the intersection point using a method other than looking at the graph. We can solve the system of equations using the "elimination" method instead: (show work here as you find the intersection point using a different method).