Equality Essay

Readings: "Biological Differences Establish Gender Roles" (Reader)--required
"Culture Establishes Gender Roles" (Reader)-- required
"Both Biology and Culture Help Establish Gender Roles" (Reader)--required
"Relinquishing Oz: Every Girl's Anti-adventure Story" (P.S. p. 37)--optional
"She Had It All" (P.S. p. 146)-- optional
"The Man-Made Myth" (P.S. p. 385)--optional

In the 2004 Summer Olympics held in Athens, Justin Gatlin of the United States won the men's 100 meters in a time of 9.85 seconds. Yulia Nesterenko of the Belarus won the women's 100 in 10.93 seconds. Of course, the winning time for the men was faster than the winning time for the women, but will this always be the case?

In the mathematical portion of this exercise, you will be using mathematical techniques to examine and interpret data, make a carefully thought-out prediction, and think critically about its implications for our society. Most people believe that men are athletically superior to women. Working this exercise will allow you to use mathematical data to reflect on one aspect of that issue - men's and women's running times. You will use your results from this exercise as one part of your argument in the Equality Essay for the Tools for Thought Learning Community.

Initial Mathematical Work

In this exercise you will use data on men's and women's winning running times for the 100 meter races in the Olympics during the last 100 years and your own linear models to predict future winning times for both men and women. Closely examine the graphs, compare your predictions for men with your predictions for women, and think about why they differ. Reacting critically to your predictions, think about whether you expect the trends to continue indefinitely. What are the implications in the data for our society as a whole? [Note: the data are given at the end of this exercise.]

To Get Started

- Construct a graph that shows the winning times for both men and women for the 100 meter races since 1896.
- Select, wisely, two data points from the men's results, and use these to construct a linear model for the men's times. Use your model to construct a table that gives predictions for the future men's winning times for the 100 meter races; include in your table predictions for the years 2008, 2100, and 2200.

- Select, wisely, two data points from the women's results, and use these to construct a linear model for the women's times. Use your model to construct a table that gives predictions for the future women's winning times for the 100 meter races; include in your table predictions for the years 2008, 2100, and 2200.

- Modify your graph to include the graphs of the linear models for the men's and women's winning times.

- Use the graph to predict the year when women will run the 100 meters as fast as men.

- Consider the two mathematical models (that is, the equations). Solve the system of equations algebraically to predict the year when women will run the 100 meters as fast as men.

To Support Your Essay

Hand in your mathematical analysis of the data. Summarize the algebra that you used. Include the graphs and tables you created, and the analytical solution to the system of equations. Be sure to describe and interpret them, briefly, referring to specific years and times.

Writing Your Paper

The readings for this paper all discuss gender issues in various ways. Using these readings as a basis for agreement or disagreement, and thinking about the implications of the mathematical work you have done on male and female running times and what they suggest about athletic equality, you will give, in your essay, an extended definition of what you think gender equality should or should not mean. This concept is a troubling one in our culture, but this essay gives you the opportunity to think honestly and openly about it.

First, read the essays carefully, marking material that might be useful to you in delineating your definition. You will need to use quotations from at least 2 of these essays in your writing. The longer essays in P.S. are optional—the first two use a film and a book, respectively, as the basis for discussion, and the last looks at gender from an anthropological point of view. Although they are long, these essays do provide much potential support material for your own essay.

Look ahead in <u>The Practical Stylist</u> to the section on definition (pp. 172-175). There are several good strategies suggested and a couple of short but helpful examples. Plan to incorporate several strategies into your essay.

The structure for this essay should conform to Baker's Keyhole. Your thesis, your main point about gender equality, should be located at the end of the opening paragraph. The body should consist of 3 to 4 well-developed middle paragraphs, all with clear topic sentences and ample explanation, details, and examples. Quotations should be identified and introduced so that they become embedded in your own sentences. Discuss each quotation thoroughly--don't expect the reader to infer the point you wanted to make with it. The ending paragraph, the reverse funnel, should reassert your thesis in a fresh way, and then generalize, with broader implications of your idea.

Incorporate your mathematical work into one of these body paragraphs. Explain the data that you worked with and how you arrived at your predictions. Then explain how this prediction relates to your definition: does it contradict it in some way or does it lend some support to your ideas? You will also attach the mathematical work, prepared at home, to your finished essay (bring 2 copies!).

You will be writing this paper in class, although you should have a well-planned outline to work from. The outline may include complete sentences only for your thesis and topic sentences.

About 3 pages. Bring a blank blue book, your outline, your mathematical work, and a pen to class!

Data:

The Hundred in the Olympics

year	men	women
1896	12.0	* * *
1900	11.0	* * *
1904	11.0	* * *
1908	10.8	* * *
1912	10.8	* * *
1920	10.8	* * *
1924	10.6	* * *
1928	10.8	12.2
1932	10.3	11.9
1936	10.3	11.5
1948	10.3	11.9
1952	10.4	11.5
1956	10.5	11.5
1960	10.2	11.0
1964	10.0	11.4
1968	9.95	11.00
1972	10.14	11.07
1976	10.06	11.08
1980	10.25	11.60
1984	9.99	10.97
1988	9.92	10.54
1992	9.96	10.82
1996	9.84	10.94
2000	9.87	10.75
2004	9.85	10.93

Note: The data source is *The World Almanac and Book of Facts, 2003*, pages 872, 875. Additional data from the *New York Times*.