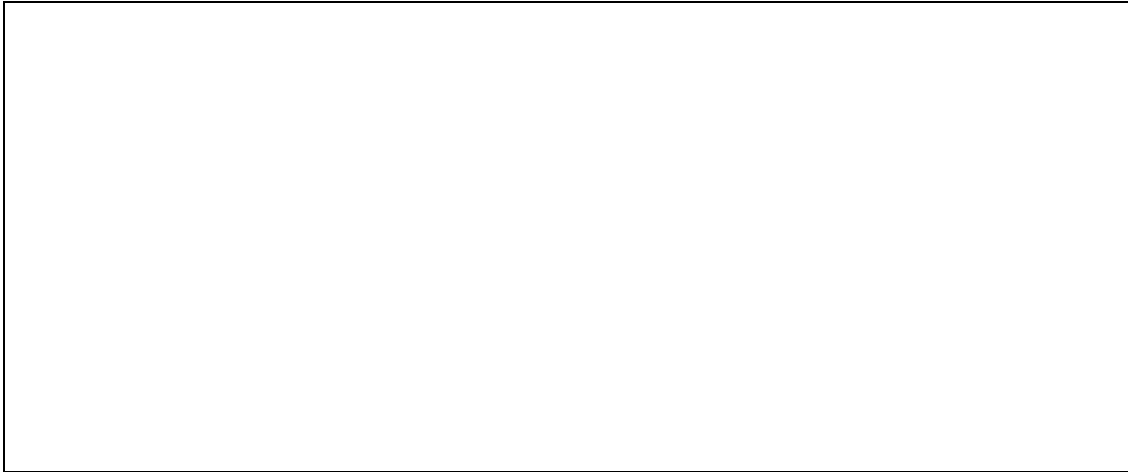


Student Name: \_\_\_\_\_

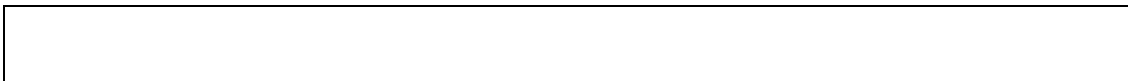
### Gender Gap Worksheet

Use the [CEPR Visualization Applet](#) to explore the data and answer the following questions.

1. Plot the distribution of *earnings* using a histogram. Focus your analysis on individuals who earned \$150,000 or less. Describe the distribution.



2. Plot the distribution of *age* using a histogram. Based on the plot, which value best captures a typical value in the data?
  - a. Mean
  - b. Median
  - c. Mode
  - d. Standard deviation
3. What plot would you choose to explore the relationship between *earnings* and *education*?
  - a. Scatter plot
  - b. Line graph
  - c. Box plot
  - d. None of the above
4. Plot a line graph using median *earnings* for your y axis, and *age* for your x axis. What is the largest difference in median *earnings* between males and females when you factor in *age*?



Student Name: \_\_\_\_\_

5. Explore the relationship between *earnings* and *education* by gender using boxplots. Do not remove individuals who earned more than \$150,000. Describe your observations.



**For questions 6-8 select the best plot to investigate the question then select the best response to convey your findings.**

6. “Does a woman’s occupation affect how much she earns compared to a man?”.
- What plot would you choose to investigate this question?
    - Scatterplot with x: Occupation and y: Earnings separated by gender
    - Stacked bar with x: Occupation and y: Earnings separated by gender
    - Boxplot with x: Occupation and y: Earnings separated by gender
    - Histogram of earnings for each occupation separated by gender
  - Look at boxplots of earnings by gender for the following occupations: 18: Lawyers, Judges, and Magistrates and 27: Health Technicians. How would you best convey your findings?
    - Lawyers, Judges, and Magistrates have little difference in earnings, while Health Technicians have a large difference.
    - Lawyers, Judges and Magistrates on average have no difference in earnings, while Health Technicians on average men make about \$13,000 more a year.
    - There is no difference in median earnings between men and women for Lawyers, Judges, and Magistrates, while the median earnings for male health technicians are \$15,000 more than females.
    - Median earnings show no difference between men and women for Lawyers, Judges, and Magistrates, while male health technicians earn more than females.

Student Name: \_\_\_\_\_

7. “Does a woman’s race affect how much she makes compared to a man?”.
- What plot would you use to investigate this question?
    - Scatterplot with x: Race and y: Earnings separated by gender
    - Stacked bar with x: Race and y: Earnings separated by gender
    - Boxplot with x: Race and y: Earnings separated by gender
    - Histogram of earnings for each race separated by gender
  - Compare earnings between Black and White respondents. How would you *best* convey your findings?
    - Blacks on average earned \$8,000 less than Whites
    - Median earnings for White women were \$5,000 more than Black women.
    - The difference in median earnings for White male and females was \$13,000 compared to a difference of \$5,000 for Black male and females. Additionally, there was a \$5,000 difference between White and Black women.
    - There was a difference of \$18,000 in median earnings between White males and Black females.
8. Suppose you were asked “Do women with children pay a ‘motherhood penalty’?”.
- What plot would you use to investigate this question?
    - Scatterplot with x: FamilySize and y: Earnings separated by gender
    - Stacked bar with x: FamilyMakeup and y: Earnings separated by gender
    - Boxplot with x: FamilySize and y: Earnings separated by gender
    - Histogram of earnings for each category of FamilyMakeup separated by gender
  - Which of the following sentences *best* summarizes your findings about the earnings between men and women when we consider the number of children in the family?
    - Men and women react to changes in children differently
    - Both men and women earn less as the number of children increases.
    - The slope of male and female earnings was negative for both men and women, in other words, children had negatives effect on earnings regardless of gender.
    - The slopes for earnings as family size increased shows a steeper negative slope for females than it does for males. This suggests that women pay a greater penalty for having children than men do.