1. Suppose that a researcher, using wage data on 250 randomly selected male workers and 280

female workers, estimates the OLS regression

                   R2 = 0.06    ,   

 and (0.23) (0.36) where the quantity in parentheses is the standard error of the estimated coefficient.

wage is measured in dollars per hour and male is a binary variable that is equal to 1 if  the person is a male and 0 if the person is a female. Define the wage gender gap as the difference in mean earnings between men and women.

1. What is the estimated gender gap?

2. Is the estimated gender gap significantly different from zero?

3. Construct a 95% confidence interval for the gender gap.

4. In the sample, what is the mean wage of women? Of men?

5. Another researcher uses these same data but regresses wages on female, a variable that

is equal to 1 if the person is female and 0 if the person is a male. What are the regression

estimates calculated from this regression? And the

R2 coefficient?