Consider the following estimated equations:

Model 1: n=706    R2=0.113

* = 3638.25 - 0.148totwrk - 11.13 educ +2.20age

         (112.28)             (0.017)                (5.88)               (1.45)

Where the quantity in parentheses is the standard error of the estimated coefficients respectively.

 Model 2:

=3586.38 - 0.151totwrk             n = 706     R2 = 0.103

         (38.91)        (0.017)

 Where the quantity in parentheses is the standard error of the estimated coefficients respectively.

where sleep and totwrk (total work) are measured in minutes per week and educ and age are measured in years.

Answer the following

1. Test the overall significance of model 1. What do you conclude?
2. Based on model 1, test the significance of educ and age individually. Use a 5% level.
3. Use the F-test to determine whether educ and age are jointly significant in model 1. Use a 5% level. Which model would you prefer?
4. Compute the adjusted-R2 coefficients for both models. Based on this statistic, which model
would you prefer? Explain.
5. Do your answers in (c) and (d) agree?