Problems Saltz Chap 10

1. R2 = 0.351 This is a relatively low R2 value and means that about 35% of the variance of output(income) can be described by the model.
2. UHRSWORK has a coefficient of 1202.21. This means that for every increase of one hour of work per week, INCEARN will increase by 1202.21.
3. Chart, scatter chart

   Description automatically generated
4. Chart, histogram

   Description automatically generated
5. From my model and graphs, I think it would be hard to predict income by solely using UHRSWORK. For my model, I used INCEARN ~ UHRSWORK + AGE + SEX + NCHILD + MARST. I did steps 2-4 in R using NCHILD as well and got similar results. I think with the R2 value being low and linear model fitting the graph very loosely, it’d be hard to use it for prediction. Both of my bar graphs appear to have the look of a cubic function, rising, falling, and rising again. I am not sure how to explain the dip in income for 90 hours, other than rounding or lack of people that work that many hours. Without the dip at 90 hours, I would even suggest a quadratic model would maybe do well. Intuitively, I would think that UHRSWORK should be a logistic sort of function, where low hours would go to low income, then increase and sort of hit a ceiling at some point.