We fit models to see the effects of certain variables on baby weight from the given data. The final model chosen to make conclusions is Model A. Here we found that the parameters which affected baby weight were gestation, parity, height, drace, dwt, smoke, number.

The effects of the variables in Model A on baby weight are as follows:

* The gestation period increases by unit, the bay weight increases by 0.454 ounces.
* As the number of previous pregnancies increases the baby weight has shown to increase by 0.7496 ounces.
* As the mother’s height increases by unit the baby weight increases by 1.2696 ounces. Therefore, it is observed that taller mothers seem to give birth to heavier babies.
* We can see that as the father’s weight increases by unit the baby weight increases by 0.07689 ounces. So, from the data we can conclude that heavier baby weights are due to heavier father weights.
* It is also observed that as the number of cigarettes per day of the mother reduces, the baby weight has shown to increase. Indicating to us the obvious harmful effects of smoking in pregnancies.
* The categorical variable has shown to have a positive increase on baby weight. By statistical observations we can primarily see that if the mother has never smoked or if the mother smokes now, the baby’s weight is higher.

In conclusion baby weight has seen to have been affected by several different parameters, some which we believed would not have an effect, in the end did have an effect.