Problem 1

Part A

$$\widehat{\text{Weight}} = 13.7244 \cdot \widehat{\text{Snout}} - 8.4761.$$

Part B

$$13.7244 \cdot (36) - 8.4761 = 485.6 \text{ lbs.}$$

Part C

The intercept doesn't have a meaningful interpretation since an alligator can not have a snout with no length.

Part D

A unit increase in snout length will cause the response of the Weight to increase by 13.7244 pounds.

Part E

A 3 unit increase in snout length will cause the response of the Weight to increase by 41.1732 pounds.

Part F

Since p is small, there is sufficient evidence to reject the null hypothesis. That is, there is sufficient evidence that the length of an alligators snout has an explanatory effect on its weight.