A)

When we run this function we get "This method has 100% coverage"

-this is probably not a reliable method bc its not good

>poll.lm <- lm(data=temp,poll.A ~ ad.money)

>plot (poll.lm)

> confint(poll.lm,'ad.money', level=.95 )

2.5 % 97.5 %

ad.money 0.0008207255 0.001133695

B1)

"This method has 95.04% coverage for district A, 94.6% coverage for district B, and 94.88% coverage for district C. It has uniform coverage (for all districts at the same time) 85.32% of the time. (95% required)"

"This method has 94.74% coverage for district A, 95.44% coverage for district B, and 95.06% coverage for district C. It has uniform coverage (for all districts at the same time) 85.88% of the time. (95% required)"

"This method has 95.26% coverage for district A, 94.9% coverage for district B, and 94.64% coverage for district C. It has uniform coverage (for all districts at the same time) 85.48% of the time. (95% required)"

lm.Atv <- lm(poll.A~ tv.min,data=temp)

lm.Btv <- lm(poll.B~ tv.min,data=temp)

lm.Ctv <- lm(poll.C~tv.min,data=temp)

temp.confint.Atv <- confint(lm.Atv, "tv.min", level=.95)

temp.lowestimate.Atv <- temp.confint.Atv[1]

temp.upestimate.Atv<- temp.confint.Atv[2]

temp.confint.Btv <- confint(lm.Btv, "tv.min", level=.95)

temp.lowestimate.Btv <- temp.confint.Btv[1]

temp.upestimate.Btv<- temp.confint.Btv[2]

temp.confint.Ctv <- confint(lm.Ctv, "tv.min", level=.95)

temp.lowestimate.Ctv <- temp.confint.Ctv[1]

temp.upestimate.Ctv<- temp.confint.Ctv[2]

if((tv.min.A.effect > temp.lowestimate.Atv)

& (tv.min.A.effect < temp.upestimate.Atv)) {

simulation.coverage[i,1] <- TRUE

}

if((tv.min.B.effect > temp.lowestimate.Btv)

& (tv.min.B.effect < temp.upestimate.Btv)) {

simulation.coverage[i,2] <- TRUE

}

if((tv.min.C.effect > temp.lowestimate.Ctv)

& (tv.min.C.effect < temp.upestimate.Ctv)) {

simulation.coverage[i,3] <- TRUE

}

temp.string <- paste0("This method has ",

round(mean(simulation.coverage[,1]\*100),2),"% coverage for district A, ",

round(mean(simulation.coverage[,2]\*100),2),"% coverage for district B, and ",

round(mean(simulation.coverage[,3]\*100),2),"% coverage for district C. ",

"It has uniform coverage (for all districts at the same time) ", round(mean(apply(simulation.coveragetv1,sum)==3)\*100,2),"% of the time. (95% required)")

print(temp.string)

"This method has 95.34% coverage for district A, 95.36% coverage for district B, and 94.46% coverage for district C. It has uniform coverage (for all districts at the same time) 85.76% of the time. (95% required)"

B2)

2.5 % 97.5 %

ad.money 0.0004205687 0.007384268