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| > vius$ones<-1  > ##QUESTION 34.  > ## PROBLEM A). Total number of trucks  >  >  >  > svytruck<-svydesign(id=~1, data=vius, strata=~STRATUM, weights = ~TABTRUCKS)  >  > svytruck  Stratified Independent Sampling design (with replacement)  svydesign(id = ~1, data = vius, strata = ~STRATUM, weights = ~TABTRUCKS)  >  >  >  > svytotal(~ones,svytruck)  total SE  ones 85174776 0  >  > confint(svytotal(~ones,svytruck),df=degf(svytruck))  2.5 % 97.5 %  ones 85174776 85174776  >  > ##PROBLEM B). Total number of truck miles driven in 2002  >  > svytotal(~MILES\_ANNL,svytruck)  total SE  MILES\_ANNL 1.1147e+12 6492344384  >  > confint(svytotal(~MILES\_ANNL,svytruck),df=degf(svytruck))  2.5 % 97.5 %  MILES\_ANNL 1.102003e+12 1.127453e+12  > #################################################################################################  > #PROBLEM C)  > ##Number of truck miles driven in each of the five trucktype classes  >  > c1<-svydesign(id=~1, data=vius[vius$TRUCKTYPE==1,], strata=~STRATUM, weights = ~TABTRUCKS)  >  > svytotal(~MILES\_ANNL,c1)  total SE  MILES\_ANNL 4.2829e+11 4708839922  >  > confint(svytotal(~MILES\_ANNL,c1),df=degf(c1))  2.5 % 97.5 %  MILES\_ANNL 419064382590 437524621573  >  >  >  > c2<-svydesign(id=~1, data=vius[vius$TRUCKTYPE==2,], strata=~STRATUM, weights = ~TABTRUCKS)  >  > svytotal(~MILES\_ANNL,c2)  total SE  MILES\_ANNL 5.411e+11 4.408e+09  >  > confint(svytotal(~MILES\_ANNL,c2),df=degf(c2))  2.5 % 97.5 %  MILES\_ANNL 532459369198 54974033258  > c3<-svydesign(id=~1, data=vius[vius$TRUCKTYPE==3,], strata=~STRATUM, weights = ~TABTRUCKS)  >  > svytotal(~MILES\_ANNL,c3)  total SE  MILES\_ANNL 4.1279e+10 395841910  >  > confint(svytotal(~MILES\_ANNL,c3),df=degf(c3))  2.5 % 97.5 %  MILES\_ANNL 40503212994 42054955985  >  >  > c4<-svydesign(id=~1, data=vius[vius$TRUCKTYPE==4,], strata=~STRATUM, weights = ~TABTRUCKS)  >  > svytotal(~MILES\_ANNL,c4)  total SE  MILES\_ANNL 3.1753e+10 348294378  >  > confint(svytotal(~MILES\_ANNL,c4),df=degf(c4))  2.5 % 97.5 %  MILES\_ANNL 31069981309 32435330964  >  >  > c5<-svydesign(id=~1, data=vius[vius$TRUCKTYPE==5,], strata=~STRATUM, weights = ~TABTRUCKS)  >  > svytotal(~MILES\_ANNL,c5)  total SE  MILES\_ANNL 7.2302e+10 518195242  >  > confint(svytotal(~MILES\_ANNL,c5),df=degf(c5))  2.5 % 97.5 %  MILES\_ANNL 71286088245 73317491440  > #PROBLEM C)  > # The average miles per gallon (MPG) for the trucks in the population  > svymean(~MILES\_ANNL,svytruck)  mean SE  MILES\_ANNL 13088 76.224   |  | | --- | | > confint(svymean(~MILES\_ANNL,svytruck))  2.5 % 97.5 %  MILES\_ANNL 12938.14 13236.93 | |  | | |  | | --- | |  | | |
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