## Caijun Qin 11/13/2021

Perform the appropriate (with explanation why) to data cohen's kappa, i.e. weighted or unweighted on table 8.12 on page 250 and make appropriate conclusions.

The unweighted cohen's kappa is appropriate here. The individual categories that each rater (in this case snapshots in time) can choose for each person in the group of study are geographic regions of residence. The 4 possible categories bear no natural ranking or fall together into an ordinal scale. Using psych::cohen.kappa in R, the unweighted cohen's kappa estimate is 0.77 inside a 95% CI of (0.75, 0.79). According to several guidelines,  $\kappa$  here is considered above substantial by Landis & Koch and excellent by both the judgement of Cichetti & Sparrow and Fleiss. In short, the value is just secondary to the top level of almost perfect. For interpretation, we can conclude that most people have not moved outside their region of residence since age 16, with minimal association with how long they lived there. The last portion is assumed since the data is from a general survey under the assumption that specific correspondents were not cherrypicked based on age. This would assume that current age of the correspondents vary as a random sampling of the U.S. population.