Lord’s chi-square with iterative linking;

LR: use at least one linking item; then free all the others (so that this is the “right” model)

Base rate of DIF: 01 var – mean?

**In each situation: -- 1 group is enough; resample the item pars each time; two groups with different theta distribution could be one condition (e.g. N (0, 1) and N (-1, 1) may cause GGUM2004 to crash because maybe GGUM2004 is not good at dealing with non-normal distribution?)**

1. One set of item pars; saved – resample pars for each replication (no need to replicate if using real pars)
2. ~~100 reps of thetas (same distribution) and responses based on the thetas, 50 for the reference group and 50 for the focal group~~
3. 1 group to make GGUM crash; mixture distribution with different thetas – one condition
4. ~~Randomly pairing the two groups; save the pairing results~~
5. Save all 100 data sets in case the program crashes
6. Save frequencies of each #RC for each item for each group
7. Save all the fit indices (LR, AIC, BIC, CAIC)
8. Also save item pars estimates and the standard errors; sometimes the program doesn’t converge, but sometimes it does and the pars est are very extreme – s.e. will be extreme also – reasonable pars and extreme s.e.
9. **Error message:**
10. 0 frequencies – always have error
11. Error: can’t really tell for now – a (0.5, 2); N (0, 1); CAT = 4; 2 reps
    1. Looks like items with extreme delta tend to have problems, but not always;
    2. Record which item it is from which situation; taus and mean taus; then calculate proportion to see under which situation what kind of items are more likely to return error
    3. Manually do it