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 situation
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. 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