Categorical Lab #10 Assignment

For this week's assignment, please use the StemCellResearch example data posted on the Blackboard site. This dataset contains hypothetical data from a random sample of individuals belonging to certain denominations of Christianity. The variables we will use are FundSCR, which reflects the participant's opinion concerning the funding of stem cell research (1=Definitely Do Not Fund, 2=Probably Do Not Fund, 3=Probably Fund, 4=Definitely Fund), female (1=female, 0=male), and religiosity (1=liberal denomination, 2=moderate denomination, 3=fundamentalist denomination). You are particularly interested in the difference between those who definitely do not want to fund stem cell research versus the other three categories.

1. Using a cumulative logit model, assess the significance of gender and religiosity as they predict one's willingness to fund stem cell research. (2 pts.)

2. What is the probability of a male from a moderate Christian denomination wanting to fund stem cell research versus not wanting to fund it? What is the probability of a female from a liberal Christian denomination definitely wanting to fund stem cell research? (2 pts.)

3. Write a results section summarizing the effects of gender and religiosity on opinions toward stem cell research funding. Be sure to discuss the significance of the predictors and to interpret the effects. This will probably take at least two good paragraphs --- one to discuss the significance of the predictors, and one to discuss the effect(s) of the significant predictor(s). Minimum 200 words. (4 pts.)

4. Perhaps prior research suggests that it might not be wise to have made the proportional odds assumption. Test the assumption of proportional odds using an adjacent category logit model in which the ordinal measure FundSCR is predicted by gender and religiosity. What do you conclude? If your conclusion suggests the proportional odds assumption should not be made, discuss between which categories the largest changes in odds can be observed for a one point change in religiosity. (2 pts.)