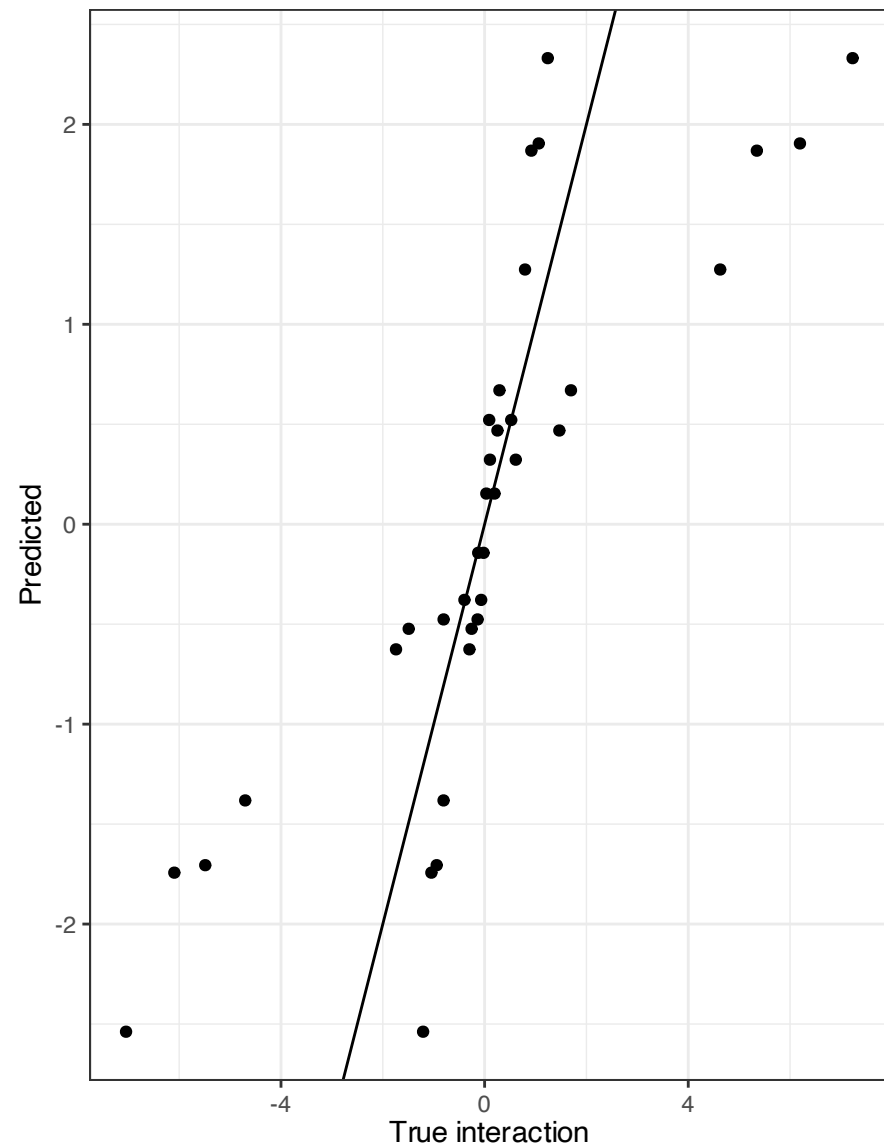
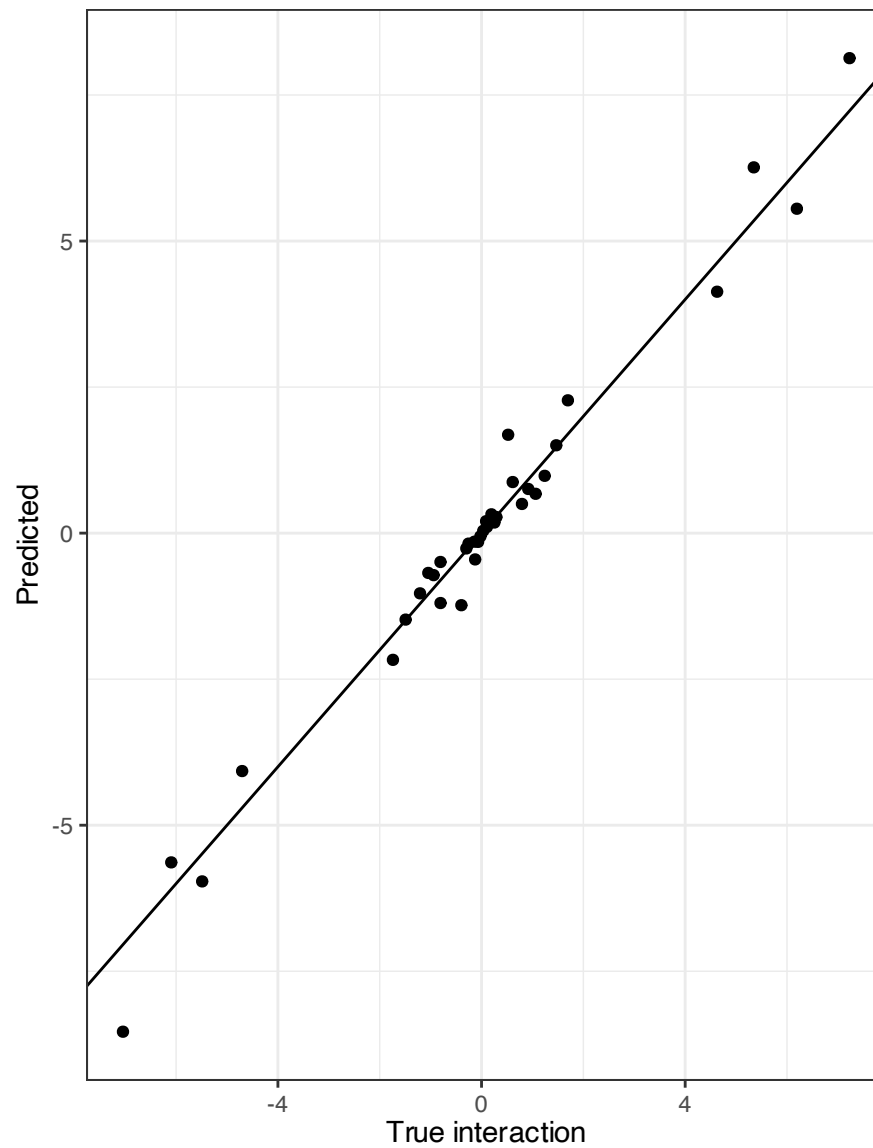


Model 1: $\sum_q^Q \lambda_q \beta_{iq}^{(1)} \beta_{jq}^{(2)}$ - RMSE = 1.9845



Model 2: $\sum_q^{Q_1} \lambda_q^{(1)} \beta_{iq}^{(1)} \beta_{jq}^{(2)} + \sum_q^{Q_2} \lambda_q^{(2)} \beta_{iq}^{(1)} \beta_{jq}^{(2)} \beta_{kq}^{(3)}$
RMSE = 0.4985



Model 3: $\sum_q^Q \lambda_q \beta_{iq}^{(1)} \beta_{jq}^{(2)} \beta_{kq}^{(3)}$ - RMSE = 0.5128

