The major objective of this multi-level study which uses a statistical sample in the Ugandan secondary schools is to explore the effects of school, class/teacher and student characteristics on attitude toward mathematics (ATM) and mathematics achievement (MA) among boys and girls. The proposal is based on a thorough review of existing literature and studies that recognize the inherent difficulties in determining the ATM-MA relationship in a heterogeneous non-uniform environment, and the persistent poor performance negative attitude among secondary students, especially girls.nbsp; Using a three level conceptual model, the study examines the relationship between the explanatory and response variables.