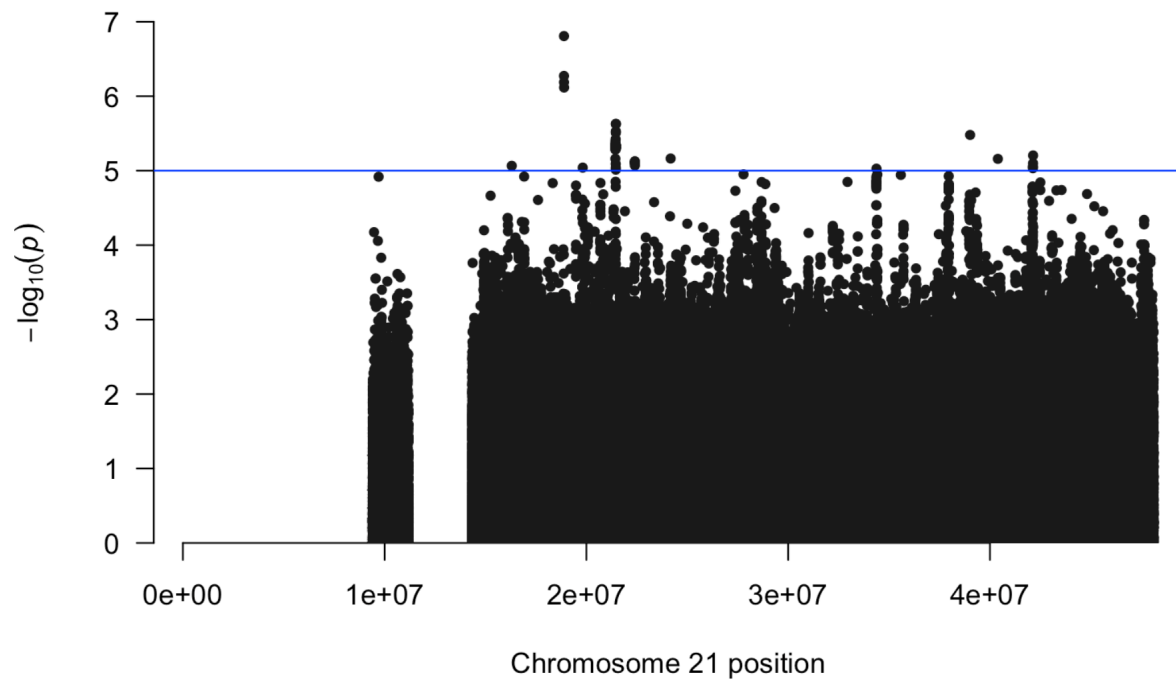


Question 1.

Here is the Manhattan plot of the p-values found in the previous section, as well as the 'chr' and 'location' vectors found in lab1.Rdata.

**Question2.**

Please see the below table for the smallest 9 p-values found in the analysis, their locations, and their corresponding rs-numbers. I looked up the rs-numbers for each of the locations on the ncbi.nlm.nih.gov website.

Chromosome	p-value	location	rs-number
21	1.557500e-07	18887601	rs7279313
21	5.341077e-07	18887201	rs8129365
21	6.498068e-07	18887483	rs8129817
21	7.643547e-07	18892725	rs59660381
21	2.356621e-06	21460976	rs78892776
21	2.356621e-06	21460979	rs79009469
21	2.963624e-06	21458577	rs78552707
21	3.099801e-06	21458112	rs77095203
21	3.312984e-06	39016910	rs1787423

Question 3.

Below are the 9 scatter plots of the smoking data (response variable) against each of the minor allele frequencies that correspond to each of the 9 locations for the smallest p-values found in previous questions. We can see from the correlation coefficients for each plot that the fit is relatively strong in each case.

