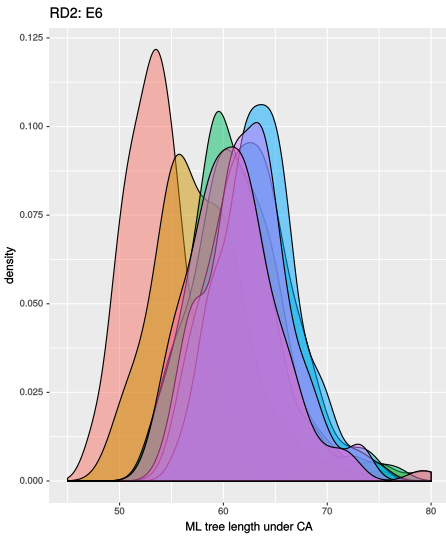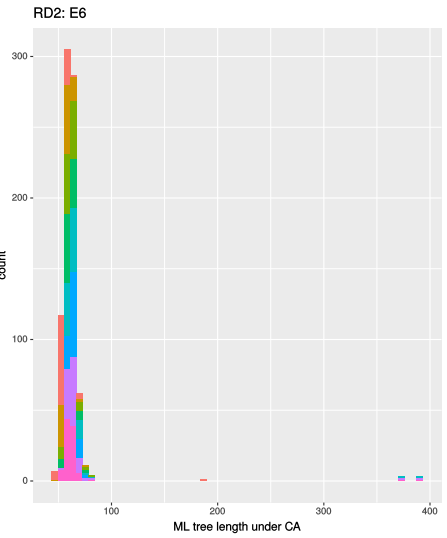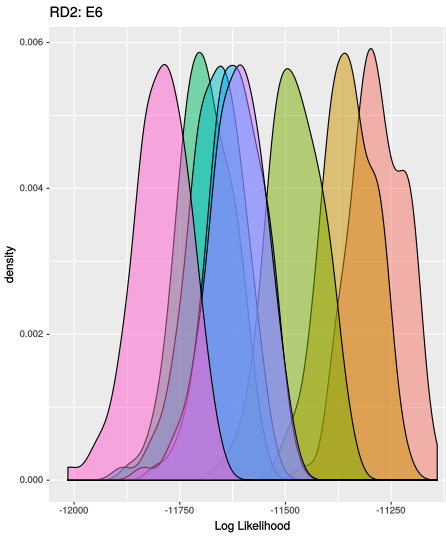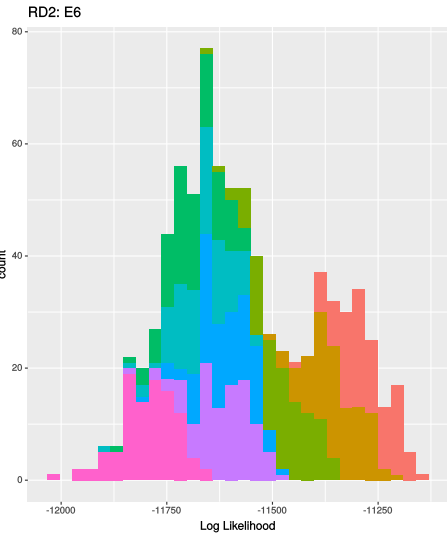# Random Permutation Test
Reduced Dataset 2: E6

H0: (gray-blue-yellow-red-black-green)
H1: gray+(blue-yellow-red-black-green)
H2: gray+blue+(yellow-red-black-green)
H3: gray+blue+yellow+(red-black-green)
H4: gray+blue+yellow+red+(black-green)
H5: gray+blue+(red-black)+(green-yellow)
H6: gray+blue+red+black+(green-yellow)
H7: gray+blue+yellow+red+black+green

Kruskal-Wallis rank sum test on ML tree length
chi-squared = 245.99, df = 7, p-value < 2.2e-16

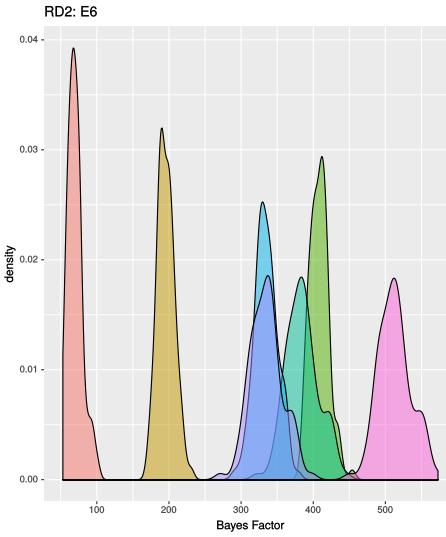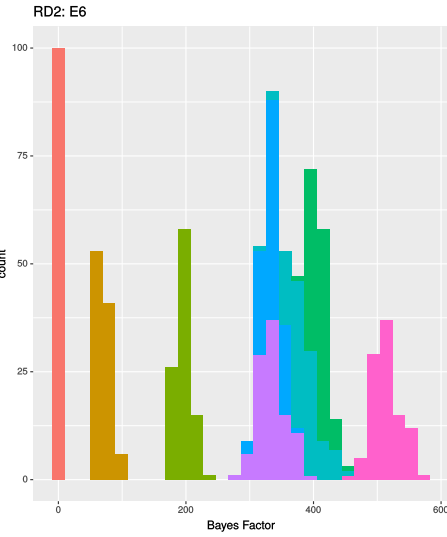**Multiple comparison test after Kruskal-Wallis**
p.value: 0.05

	obs.dif	critical.dif	difference
tlen_H0-tlen_H1	127.82	102.0845	TRUE
tlen_H0-tlen_H2	298.49	102.0845	TRUE
tlen_H0-tlen_H3	272.81	102.0845	TRUE
tlen_H0-tlen_H4	376.16	102.0845	TRUE
tlen_H0-tlen_H5	404.37	102.0845	TRUE
tlen_H0-tlen_H6	359.76	102.0845	TRUE
tlen_H0-tlen_H7	284.35	102.0845	TRUE

Kruskal-Wallis rank sum test on the Log Likelihood
chi-squared = 672.47, df = 7, p-value < 2.2e-16

Multiple comparison test after Kruskal-Wallis
p.value: 0.05

	obs.dif	critical.dif	difference
lnl_H0-lnl_H1	62.68	102.0845	FALSE
lnl_H0-lnl_H2	181.64	102.0845	TRUE
lnl_H0-lnl_H3	508.34	102.0845	TRUE
lnl_H0-lnl_H4	464.06	102.0845	TRUE
lnl_H0-lnl_H5	373.04	102.0845	TRUE
lnl_H0-lnl_H6	373.03	102.0845	TRUE
lnl_H0-lnl_H7	651.45	102.0845	TRUE

Kruskal-Wallis rank sum test on the ΔBF
chi-squared = 658.24, df = 6, p-value < 2.2e-16

Multiple comparison test after Kruskal-Wallis
p.value: 0.05

	obs.dif	critical.dif	difference
bf_H1-bf_H2	100.00	86.8822	TRUE
bf_H1-bf_H3	481.73	86.8822	TRUE
bf_H1-bf_H4	409.48	86.8822	TRUE
bf_H1-bf_H5	253.42	86.8822	TRUE
bf_H1-bf_H6	255.38	86.8822	TRUE
bf_H1-bf_H7	599.99	86.8822	TRUE
bf_H2-bf_H3	381.73	86.8822	TRUE
bf_H2-bf_H4	309.48	86.8822	TRUE
bf_H2-bf_H5	153.42	86.8822	TRUE
bf_H2-bf_H6	155.38	86.8822	TRUE
bf_H2-bf_H7	499.99	86.8822	TRUE
bf_H3-bf_H4	72.25	86.8822	FALSE
bf_H3-bf_H5	228.31	86.8822	TRUE
bf_H3-bf_H6	226.35	86.8822	TRUE
bf_H3-bf_H7	118.26	86.8822	TRUE
bf_H4-bf_H5	156.06	86.8822	TRUE
bf_H4-bf_H6	154.10	86.8822	TRUE
bf_H4-bf_H7	190.51	86.8822	TRUE
bf_H5-bf_H6	1.96	86.8822	FALSE
bf_H5-bf_H7	346.57	86.8822	TRUE
bf_H6-bf_H7	344.61	86.8822	TRUE