

if lose								
dealer $\geq 7$	player $\geq 17$	player have A	can split	hit	stand	double	split	rationale
				0	0	0	0	this variation is not possible since having an ace and being able to split indicates having a pair of ace. hence player value is 2/12 which is less than 17
T	T	T	T					
T	T	T	F	lose_prob*1.1	lose_prob*0.8	lose_prob*1.2	0	player already has high value. even with an ace, it's risky to go for more cards
T	T	F	T	lose_prob*1.2	lose_prob *0.8	lose_prob*1.3	lose_prob*1.4	player already has high value. it's risky to go for more cards
T	T	F	F	lose_prob*1.2	lose_prob *0.8	lose_prob*1.3	0	player already has high value. it's risky to go for more cards
T	F	T	T	win_prob*1.1	win_prob *0.9	win_prob*0.8	win_prob *1.5	splitting aces has high value
T	F	T	F	win_prob*1.2	win_prob*0.8	win_prob*0.7	0	players have less to lose if dealer's hidden card is a 10
T	F	F	T	win_prob*1.2	win_prob*0.9	win_prob*0.7	win_prob*0.6	players have less to lose if dealer's hidden card is a 11
T	F	F	F	win_prob*1.2	win_prob*0.9	win_prob*0.7	0	players have less to lose if dealer's hidden card is a 12
				0	0	0	0	this variation is not possible since having an ace and being able to split indicates having a pair of ace. hence player value is 2/12 which is less than 17
F	T	T	T					
F	T	T	F	win_prob*0.9	win_prob	win_prob*1.1	0	mix of scenarios between stand and double are optimal
F	T	F	T	win_prob*0.7	win_prob*0.9	win_prob*0.6	win_prob	mix of scenarios between stand and split are optimal
F	T	F	F	win_prob*0.7	win_prob*1.3	win_prob*0.6	0	dealer has decent chance to bust, no need to take more risks
F	F	T	T	win_prob*1.1	win_prob	win_prob*0.9	win_prob*1.5	splitting aces has high value
				win_prob*1.1	win_prob*0.9	win_prob*1.3	0	doubling down has low risk and decent reward since players are able to draw good cards away from dealer
F	F	T	F					
F	F	F	T	win_prob*1.1	win_prob*0.9	win_prob*0.9	win_prob*1.2	splitting has low risk and decent reward since players are able to draw good cards away from dealer
F	F	F	F	win_prob*0.9	win_prob*1.3	win_prob*0.7	0	dealer has decent chance to bust, no need to take more risks