Example for bucket elimination algorithm

What is the probability that a person has tuberculosis, given that he/she has dyspnoea and has visited Asia recently?

$P(\alpha=T) = 0.01$
$H_\alpha(\tau) = P(\tau|\alpha=T)*P(\alpha=T) = (0.0005, 0.0095)$

ε	ξ	P(ξ|ε)	$H_\xi(\varepsilon)$
T	T	0.98	1
T	F	0.02	
F	T	0.05	1
F	F	0.95	

τ	β	λ	ε	P(ε|τ,λ)	Hδ(ε,β)	H_ξ(ε)	H_ε(τ,β,λ)
T	T	T	T	1	0.9	1	0.9
T	T	T	F	0	0.8	1	
T	T	F	T	1	0.9	1	0.9
T	T	F	F	0	0.8	1	
T	F	T	T	1	0.7	1	0.7
T	F	T	F	0	0.1	1	
T	F	F	T	1	0.7	1	0.7
T	F	F	F	0	0.1	1	
F	T	T	T	1	0.9	1	0.9
F	T	T	F	0	0.8	1	
F	T	F	T	0	0.9	1	0.8
F	T	F	F	1	0.8	1	
F	F	T	T	1	0.7	1	0.7
F	F	T	F	0	0.1	1	
F	F	F	T	0	0.7	1	0.1
F	F	F	F	1	0.1	1	

δ=T	ε	β	$H_\delta(\varepsilon,\beta)=P(\delta=T|\varepsilon,\beta)$
T	T	T	0.9
T	T	F	0.7
T	F	T	0.8
T	F	F	0.1

τ	β	σ	λ	P(λ|σ)	H_ε(τ,β,λ)	H_λ(τ,β,σ)
T	T	T	T	0.1	0.9	0.9
T	T	T	F	0.9	0.9	
T	T	F	T	0.01	0.9	0.9
T	T	F	F	0.99	0.9	
T	F	T	T	0.1	0.7	0.7
T	F	T	F	0.9	0.7	
T	F	F	T	0.01	0.7	0.7
T	F	F	F	0.99	0.7	
F	T	T	T	0.1	0.9	0.81
F	T	T	F	0.9	0.8	
F	T	F	T	0.01	0.9	0.801
F	T	F	F	0.99	0.8	
F	F	T	T	0.1	0.7	0.16
F	F	T	F	0.9	0.1	
F	F	F	T	0.01	0.7	0.106
F	F	F	F	0.99	0.1	

τ	β	σ	P(β|σ)	P(σ)	H_λ(τ,β,σ)	H_σ(τ,β)
T	T	T	0.6	0.5	0.9	0.405
T	T	F	0.3	0.5	0.9	
T	F	T	0.4	0.5	0.7	0.385
T	F	F	0.7	0.5	0.7	
F	T	T	0.6	0.5	0.81	0.36315
F	T	F	0.3	0.5	0.801	
F	F	T	0.4	0.5	0.16	0.0691
F	F	F	0.7	0.5	0.106	

τ	β	H_σ(τ,β)	$H_\beta(\tau)$
T	T	0.405	0.79
T	F	0.385	
F	T	0.36315	0.43225
F	F	0.0691	

τ	$H_\alpha(\tau)$	$H_\beta(\tau)$	$H_\alpha(\tau)* H_\beta(\tau)$	P(τ|α=T, δ=T)
T	0.0005	0.79	0.000395	0.088
F	0.0095	0.43225	0.004106375	0.912