1

Beispiel	x_1	x_2	x_3	Klasse
1	a	a	a	1
2	a	b	a	2
3	a	a	b	1
4	b	a	b	1
5	a	a	c	1
6	b	b	b	2

$\alpha^{(0)} = *$

$\alpha^{(1)} = 1$

$\alpha^{(2)} = x_1(2, *)$

$\alpha^{(3)} = x_1(x_2(1, *), *)$

$\alpha^{(4)} = x_1(x_2(1, *), 1)$

$\alpha^{(5)} = \;''\quad\quad''\quad\quad''$

$\alpha^{(6)} = x_1(x_2(1, *), x_2(*, 2))$

$\alpha^{(7)} = \;''\quad\quad''\quad\quad''$

$\alpha^{(8)} = x_1(x_2(1, 2), x_2(*, 2))$

$\alpha^{(9)} = \;''\quad\quad''\quad\quad''$

$\alpha^{(10)} = x_1(x_2(1, 2), x_2(1, 2))$

$\alpha^{(11)} = \;''\quad\quad''\quad\quad''$

$\vdots$

$\alpha^{(16)} = x_1(x_2(1, 2), x_2(1, 2))$

(2)

$\alpha^{(0)} = *$

$\alpha^{(1)} = 1$

$\alpha^{(2)} = x_1(2, *)$

$\alpha^{(3)} = x_1(x_2(1, *), *)$

$\alpha^{(4)} = x_1(x_2(1, *), 1)$

$\alpha^{(5)} = \quad " \quad " \quad "$

$\alpha^{(6)} = x_1(x_2(1, *), x_2(*, 2))$

$\alpha^{(7)} = x_1(x_2(x_3(*, 2), *), x_2(*, 2))$

$\alpha^{(8)} = x_1(x_2(x_3(1, 2), *), x_2(*, 2))$

$\alpha^{(9)} = x_1(x_2(x_3(1, 2), 2), x_2(*, 2))$

$\alpha^{(10)} = \quad " \quad " \quad "$ Fehler

$\alpha^{(11)} = x_1(x_2(x_3(1, 2), 2), x_2(1, 2))$

$\alpha^{(12)} = x_1(x_2(x_3(1, 2, 1), 2), x_2(1, 2))$

$\alpha^{(13)} = \quad " \quad " \quad "$

$\vdots$

$\alpha^{(19)} = x_1(x_2(x_3(1, 2, 1), 2), x_2(1, 2))$

x_1 (< 35, ≥ 35)
x_2 (niedrig, hoch)
x_3 (Abi, Bachelor, Master)

(4) $S1 = 4 \quad S2 = 0{,}8$

Nr.	x_1 Alter	x_2 Einkommen	x_3 Bildung	x_4 Kandidat
1	≥ 35	hoch	Abitur	O
2	< 35	niedrig	Master	O
3	≥ 35	hoch	Bachelor	M
4	≥ 35	niedrig	Abitur	M
5	≥ 35	hoch	Master	O
6	< 35	hoch	Bachelor	O
7	< 35	niedrig	Abitur	M

$\alpha^{(0)} = *$

$\alpha^{(1)} = /O1/$

$\alpha^{(2)} = /O2/$

$\alpha^{(3)} = /O2M1/$

$\alpha^{(4)} = /O2M2/ \qquad x_1(<35 \Rightarrow *, \geq 35 \Rightarrow M1)$

$\alpha^{(5)} = x_1(<35 \Rightarrow *, \geq 35 \Rightarrow M1O1)$

$\alpha^{(6)} = x_1(<35 \Rightarrow O1, \geq 35 \Rightarrow M1O1)$

$\alpha^{(7)} = x_1(<35 \Rightarrow O1M1, \geq 35 \Rightarrow M1O1)$

$\alpha^{(8)} = x_1(<35 \Rightarrow O1M1, \geq 35 \Rightarrow O2M1)$

$\alpha^{(9)} = x_1(<35 \Rightarrow O2M1, \geq 35 \Rightarrow O2M1)$

$\alpha^{(10)} = x_1(<35 \Rightarrow O2M1, \geq 35 \Rightarrow x_2(n \Rightarrow *, h \Rightarrow M1)$

$\alpha^{(11)} = x_1(<35 \Rightarrow O2M1, \geq 35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow M1)$

$\alpha^{(12)} = x_1(<35 \Rightarrow O2M1, \geq 35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow M1O1)$

$\alpha^{(13)} = x_1(<35 \Rightarrow x_2(n \Rightarrow *, h \Rightarrow O1), \geq 35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow M1O1)$

$\alpha^{(14)} = x_1(<35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow O1), \geq 35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow M1O1)$

$\alpha^{(15)} = x_1(<35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow O1), \geq 35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow M1O2)$

$\alpha^{(16)} = x_1(<35 \Rightarrow x_2(n \Rightarrow M1O1, h \Rightarrow O1), \geq 35 \Rightarrow x_2(n \Rightarrow M1, h \Rightarrow M1O2)$

$\alpha^{(17)} = x_1(x2(M1O1, O1), x_2(M1, x_3(*, M1, *)))$

$\alpha^{(18)} = x_1(x2(M1O1, O1), x_2(M2, x_3(*, M1, *)))$

$\alpha^{(19)} = x_1(x2(M1O1, O1), x_2(M2, x_3(*, M1, O1)))$

$\alpha^{(20)} = x_1(x2(M1O1, O2), x_2(M2, x_3(*, M1, O1)))$

$\alpha^{(21)} = x_1(x2(M1O1, O2), x_2(M2, x_3(*, M1, O1)))$

$\alpha^{(22)} = x_1(x_2(M_2O_1, O_2), x_2(M_2, x_3(O_1, M_1, O_1)))$

$\alpha^{(23)} = x_1(x_2(x_3(*, *, O_1), O_2), x_2(M_2, x_3(O_1, M_1, O_1)))$

$\alpha^{(24)} = x_1(x_2(x_3(*, *, O_1), O_2), x_2(M_2, x_3(O_1, M_2, O_1)))$

$\alpha^{(25)} = x_1(x_2(x_3(*, *, O_1), O_2), x_2(M_3, x_3(O_1, M_2, O_1)))$

$\alpha^{(26)} = x_1(x_2(x_3(*, *, O_1), O_2), x_2(H_3, x_3(O_1, M_2, O_2)))$

$\alpha^{(27)} = x_1(x_2(x_3(*, *, O_1), O_3), x_2(H_3, x_3(O_1, M_2, O_2)))$

$\alpha^{(28)} = x_1(x_2(x_3(M, *, O_1), O_3), x_2(H_3, x_3(O_1, M_2, O_2)))$

$\alpha^{(29)} = x_1(x_2(x_3(M, *, O_1), O_3), x_2(H_3, x_3(O_2, M_2, O_2)))$

$\alpha^{(29)} = x_1(x_2(x_3(M, *, O_2), O_3), x_2(H_3, x_3(O_2, M_2, O_2)))$

$\alpha^{(30)} = x_1(x_2(x_3(M, *, O_2), O_3), x_2(H_3, x_3(O_2, M_3, O_2)))$

$\alpha^{(31)} = x_1(x_2(x_3(M, *, O_2), O_3), x_2(M, x_3(O_2, M_3, O_2)))$

$\alpha^{(32)} = x_1(x_2(x_3(M, *, O_2), O_3), x_2(M, x_3(O_2, M_3, O_3)))$

$\alpha^{(3)} = x_1(x_2(x_3(M, *, O_2), O), x_2(M, x_3(O_2, M_3, O_3)))$

$\alpha^{(34)} = x_1(x_2(x_3(M_2, *, O_2), O), x_2(M, x_3(O_2, M_3, O_3)))$

$\vdots$ $\qquad$ $\vdots$

$\alpha^{(n)} = x_1(x_2(x_3(M, *, 0), 0), x_2(M, x_3(0, M, 0)))$

(103) $H(S) = -\sum_k p_k \cdot \log_2 p_k$

$= -\left(\frac{3}{7} \cdot \log_2 \frac{3}{7} + \frac{4}{7} \cdot \log_2 \frac{4}{7}\right) = 0{,}985$

$R(S,A)x_1 = \frac{4}{7} \cdot \left(-\log_2 \frac{1}{2}\right) + \frac{3}{7} \cdot \left(-\frac{2}{3} \cdot \log_2 \frac{2}{3} - \frac{1}{3} \cdot \log_2 \frac{1}{3}\right)$

$= 0{,}965$

$R(S,A)x_2 = \frac{4}{7} \cdot \left(-\frac{3}{4} \cdot \log_2 \frac{3}{4} - \frac{1}{4} \cdot \log_2 \frac{1}{4}\right) + \frac{3}{7} \cdot \left(-\frac{2}{3} \cdot \log_2 \frac{2}{3} - \frac{1}{3} \log_2 \frac{1}{3}\right)$

$= 0{,}857$

$R(S,A)x_3 = \frac{3}{7}\left(-\frac{2}{3} \cdot \log_2 \frac{2}{3}\right) + \frac{2}{7}\left(-\log_2 \frac{1}{2}\right)$

$= 0{,}679$