f1(O) f4🡪 f7(NR)

f2(NO) f6🡪 f8(SU)

f3(RO) f2, f7🡪 f9(OR)

f4(QNR) f1, f3, f9🡪 f10(R)

f5(UR) f5, f10🡪 f11(U)

f6(SQU) f8, f11🡪 f12(S)

f1(O)

|  |  |
| --- | --- |
| **O** | **Value** |
| T | .7 |
| F | .3 |

f2(NO)

|  |  |  |
| --- | --- | --- |
| **N** | **O** | **Value** |
| T | T | 0.7 |
| F | T | 0.3 |
| T | F | 0.3 |
| F | F | 0.7 |

f3(RO)

|  |  |  |
| --- | --- | --- |
| **R** | **O** | **Value** |
| T | T | 0.6 |
| F | T | 0.4 |
| T | F | 0.5 |
| F | F | 0.5 |

f4(QNR)

|  |  |  |  |
| --- | --- | --- | --- |
| **Q** | **N** | **R** | **Value** |
| T | T | T | 0.1 |
| F | T | T | 0.9 |
| T | T | F | 0.2 |
| F | T | F | 0.8 |
| T | F | T | 0.3 |
| F | F | T | 0.7 |
| T | F | F | 0.4 |
| F | F | F | 0.6 |

f5(RO)

|  |  |  |
| --- | --- | --- |
| **U** | **R** | **Value** |
| T | T | 0.3 |
| F | T | 0.7 |
| T | F | 0.9 |
| F | F | 0.1 |

f6(QNR)

|  |  |  |  |
| --- | --- | --- | --- |
| **S** | **Q** | **U** | **Value** |
| T | T | T | 0.3 |
| F | T | T | 0.7 |
| T | T | F | 0.4 |
| F | T | F | 0.8 |
| T | F | T | 0.3 |
| F | F | T | 0.6 |
| T | F | F | 0.7 |
| F | F | F | 0.3 |

f7(NR)

|  |  |  |
| --- | --- | --- |
| **N** | **R** | **Value** |
| T | T | 0.9 |
| F | T | 0.7 |
| T | F | 0.8 |
| F | F | 0.6 |

f8(SU)

|  |  |  |
| --- | --- | --- |
| **S** | **U** | **Value** |
| T | T | 0.4 |
| F | T | 0.6 |
| T | F | 0.7 |
| F | F | 0.3 |

f9(OR)

|  |  |  |
| --- | --- | --- |
| **O** | **R** | **Value** |
| T | T | (0.7\*0.9) + (0.3\*0.7) = 0.84 |
| F | T | (0.3\*0.9) + (0.7\*0.7) = 0.76 |
| T | F | (0.7\*0.8) + (0.3\*0.6) = 0.74 |
| F | F | (0.3\*0.8) + (0.6\*0.7) = 0.66 |

f10(O)

|  |  |
| --- | --- |
| **O** | **Value** |
| T | .7 |
| F | .3 |

P(S, Q=F) = ∑U f8(SU) ∑R f5(UR) ∑O f1(O) f3(RO) ∑N f2(NO) f7(NR)

P(S, Q=F) = ∑U f8(SU) ∑R f5(UR) ∑O f1(O) f3(RO) ∑N f2(NO) f7(NR)

= ∑U f8(SU) ∑R f5(UR) ∑O f1(O) f3(RO) f9(OR) = ∑U f8(SU) ∑R f5(UR) f10(R)

= ∑U f8(SU) f11(U)

= f12(S)