4.1	The Hilbert-style proof Su	gstem
0	1. {7A>A,7A3+7A	•
	2. {7A>A, 1A} + 7A>A	Assumption
	3. {7A>A,7A}+ A	MP 1, 2
	4. {7A > A. 7A3 + A> (7A>fa	lse) Theorem
	5. {7A7A,7A3+7A7 talse	MP3,4
	6. {7A-A, 7A}+ false	mp1,5
	7. {7A>A} + 7A> false	Deduction
	8.{7A-A3 + A	Theorem
	9. + (7A-A)+A	Deduction.
Ø	1. {7A.7B+A} + (7B+A)+	(7A7B) Axiom 1.
	2. {7A,7B>A}+7B>A	Assumption
	3. {7A, 7B>A}+7A>B	MP 1.2
	4 {1A , 7B>A}+ 7A	Assumption
	5. {7A, 7B-A} + B	MP 3, 4
	b. {7A3+ (7B+A) >B	Peduction
43	VD proof System	
0	1. 7(7pvq)	Premise
	2. 79	Assumption
	4. 7pvq	Vi : 2
	4. 1	Li:1,}
	5· 7(7P)	77: 2-4
	b. P	71e: 5
0	1. PAGTY	Premise
	2. p	Assumption
	3. q	Assumption
	4. P	Reflexitivity:2
	5. PM	ve : 3.4

	b. r	→e:1.5
	7 97	72: 4-6
	8. P+(9>1)	→v: 2-7
6	1. (PVQ) V r	Premise
	2. 1	Assumption
	3. QV1	Vi: 2
	4. PV(qVr)	٧v : ځ
	5. p . q	Assumption
	b. a	Assumption
	7. qur	vi : b
	8. PU(4UV)	Vi:7
	9. P	Assumption
	10. pu(qvv)	vi: 9
	11. Prigre	Ve: 5.6-8.9-10
	D. PULGUY)	Ve: 1.2-4.5-11
@	1. PA(QVY)	Premise
	z. qvv	/e:
	3. P	N:
	4. Y	Assumption
	5. PAY	/t: 4.4
	6. (prq) v(prr)	Vi: 5
	7. q	Assumption
	e pra	Λε: 3·7
	9 (p/2) v (p/r)	Vi = 8
	10. LPM) V(PM)	Ve: 2 46 7
9		Premise
	2 P	Assumption
	3. p v q	Vi : 2

```
11:1.3
         5.
              77
                                  71:2-4
              9
                                 Assumption
             PVq
         7
                                  Vi= 6
                                  11:1·7
              79
                                  71:6-8
          10. 7p179
                                   1:5.9
43 Formalization
   "Train Arrives Late: P
   "No taxi at the station": 9
    'Lote for the meeting': r
    { p, 7r, (p/4) >r 3+79
                    Premise
    1. P
    2. 75
                    Premise
    3. Prq → 1
                   Premise
    4. 7(PAQ) MT. 2.5
    5.
                   Assumption
       P19
                    12: 1.5
    7.
        1
                    11:4.6
        79
                    71:5-7
4.4
   CMF Reduction
    l7p→ q)→(q→ γr) = ( pv q)→(7q v7r) = 7(pv q) v(7q v7r)
     三 (7P / 74) V (7q V 7r) 三 (7P V 7q V7r) / (7q V7q V 7r)
     三(アレフタンア) 人(フタンファ) =(フタンファ)
   Resolution.
45
 OPEP
 @ p = ((qvr) A > (qAr)) = >p v ((qvr) A > (qAr)) = (>p v (qvr)) A (>p v > (qAr))
    三(7pv4Vr) / (7pv7qv7r)
```

⑤ P→ ((5vt) Λη(5Λt)) = ¬P ∨ ((5vt) Λη(5Λt)) = (¬P V (5vt)) Λ (¬P V ¬(5Λt))
三 (7pv5vt) / (7pv75 v7t)
© 5→9 = (75 × 9)
⑤ 7r→t = (r∨t)
0={p, programmer, programmer, prosve, prosve, programmer, programm
4 p3, {7p,q,r} {7p,7q,7r} {7p,5,+} {7p,75,7t} {75,4} {r,+} {7t,5}
0 7pv79 v7r 75v9 @ 7pv75v7+ rvt
7P V 7 Y 7 S
G 7P V 7 Y 79 7P V 75 V P Q Y V + 7 + VS
7713
C (VS 7PV75VY B TP P
G (VS 7) V (B) T