Lista 1	
1) Construa as dedugaes	(1)
a) { (p + 9), f n n) 3 = 9	
1 P-09	
2 2 1 1	
3. P (Simplificação / L. 2)	
4. 9 (Moder Ponens 3,2)	
(1)(p, x)(x)	
1. DAS	
2. ((Pun) - 21	
3. S (Moder Ponena 2,5)	\
4 P	
5. Pur (Adicia)	
C A CISCO	
$\frac{C[P-\Delta[9-b\pi], [P-\Delta9], p = R}{2[P-\Delta[9-b\pi])}$	
2. P-49	
3 0	
4. 9-AR Modu Penere (3,4)	
	D-
THEGAME HOPE CO, 5	
1. (PV a) -DR, ((Rug)-D(P-D(S40+1), (PAS) 14 SAN	7 4)
2. ((R U 9 - D Pd S+0+)	
3. PAS	
7. P. Mim (- 3)	
of the Morgan	
6. R (Porene 5, 1) anon	
7. Rug [Adiga 8]	
1. P- (S+++)	
9. Sta t (Popens P, 4)	
resident	

·
1)(P-D29) (~P-D(R-D9)), ((~202R)-1-29)~g1=~1
1. P-1 9
d. 2 P - 1 (R - 1 - 9).
3. [ns unR] - 2 ~ 9]]
4. ~S
5. ~S U ~ R Adigio (4)
6. q M. P(3,5)
7. 2 Met (1,6)
8. R-0 ~9 M.P(2,7)
9.~R M. H (6,8) 1- 20 9
((P19) -AR, (R-AS) (+-A NU) + (~100) (= ~ (P19)
1. ((P19)-AR
d. RAS
3. t-4 ~u
4. t
5. ~ S V V
6. ~ U M. P(5,4) (2-1)
70~5 5.0 (5,7)
PR M.+ (2,7)
9. NP 19 M. + (1,8)
9 (P-19), (9-1R), (S-1), (PUS) 1= RUT
1. P-A9
2- 9-0R.
3. 5-1 +
4. PWS
5. PAR SH(2,2)
6. Rut 0. C(3,4,5)

4)(p-2 q), ~R ~ (s-4+), R u(pvs), ~p) = q ut
(. P - 9
2. (~R ~ (S-0+))
3. (R V (P U S))
4. ~R
5. S-A+ M.P (2,4)
6. PVS S.D (3,4)
7. 9v + D. ((1, 5,6)
il P-DR, 9-DS, ~R, Pugly (RVS) 1=5
1. P-AR
2.9-05
3. ~ R
4. (PVQ) 1(RUS)
5. Rus Simplificação (4)
6. S S.D (3,5)
11 (P = 9), (9 = R) (R = S), ~ S, (P v +) 1= +
1. P = 9, (9 = R) (R = S), ~ S, (Pv+) 1= +
2. P-AR
3. R-s
4. ~8
5. Pv+
$6 \sim R M.+(3,4)$
7. ~9 M.+ (2,6)
8 ~ P M.+ (1,7)
9. + 5.0(5,8)

	rf v~t
K) (p= 9) 1 (R=05) (++U) (U=V) (~9 V~V) 1=	
1. (P-0 9) 1 (R-AS)	
2. + AV	1 10
3. U-AV	
4. ~ q v ~ V	
5. P-19 (Simp. 1)	
6. t-AV (S.P (2,3)) 7. ~P V ~t D.D (4,5,6) = (1-49) (200)	(010)
7. ~P V ~t D.D 4,5,61	
$(P_{19})(P_{19}) = (P_{1R})$	1 3
1 P14.	А
2 (P-AR)	F
3. P Simplificação (1)	1
4 R M. P(2,3)	<u> </u>
5. PAR Cong (3,4)	
AND THE ANS I SEE	11
m)(~P19), (R+P) 1= (~P1~R)	
C, (~P19)	
2. R-P	
3. ~P (Simplificosoo (1))	(
4.~R M.+ (2,3) 5.~P ~R Confunção (4,5)	
J. ~P R Confunción 1101	
N) (2p +9) - (RAS) (P-0 (RAS)) 1= 2PA	9 1-
1. (~P -A9)	(.)
$2. \sim (R \wedge S)$	1 1
3. (P-a (RASI)	-1-
4. ~P M. + ollen (2,3)	
5. 9 M. Pormond (1,4)	
6. ~ P 19 (onfunção (4,5)	

01(pug), ~R, (q-DR) 1= P
6. Pv9
2. ~R
3. 9-AR
$4. \sim 9 M. + (2.3)$
5. ρ S. $p(1,3)$
P) (P19) (RUS) (P+25) 1= R
L- P19
2. RVS - LANGE (AND CONTAL)
3. P-A ~ S
4 P Simplificação (1)
5. ~S M. P (3,4)
6. R S.D(2,5)
9) P, (P-A~9), QUR 1= P1R
1. p
2. P-0~9
3. 90R
$9 \sim 9 M.P(2,2)$
5. R S.p (3,4)
CPAR Confunção (1,5)
R)~P(Pv(9uR1),~R 1=9
1. ~P
2. (Pv (9 VR))
3. ~R
4. (90R) S.D (1,2)
5. 9 S. n (3,4)

1. Pr ~9	7
2. ~~9	
3. P-A (R15))	
49 Equidolencia (2)	
5. P S.D(L,4)	_
6. (RAS) M.P(3,5)	_
7 S Simplificosco (6)	_
- to 21 (28 P), to 2 (21 P) 20 1	1
+1(p-49) 29, (PVR) 1=1	
1. P-A9	_
2- ~9	
3. PrR	_
5. R S.D(3,4)	
U) [PV~9) (R-D~P) R 1=-9	
1. Pv ~9	
2. R-D~9	1
3. R	
4 ~ P (M. P(2,3))	
5. ~ 9 (S-D (1.4))	
V) (~P v~9), ~~ 9, (R - P) 1= ~ R	
$2 \sim 9$	
3. R-AP	
9.9 Equidolonção (2)	
5. ~P S. Dl 1,4)	
6.~ R M.+ (3,5)	

witp-a.	-9), ~~9, (~p~ (Rvs)) y /= RVS
1. P-2 ~	9
2. n. 9	
3. (~P-1)	$(R \vee S)$
4. ((quipoloncia (2)
5. ~ p	M.P (3,5)
G. (RVS)	791.07 (3,5)
X) (P19)	(P-DR) (RNS) -DAT, (9-DS) 1=nf
1. P19	1 (9.9) es (04-4)
2. P-A R	
3. (R 1 S)	-A +
49-05	
	Simplificosco(1)
6. 9 7 R	M P (25)
8. S	4.P(4,6)
9.11.45	Confunção (78)
10. nt	M.P (3,9)
2.1	
/	9-AP) ((~9VR)-AS) 1=S
1. ~P 2. 9-A P	
3. (29 V)	7) -4 5
4. ~ 9	N. + (12)
5. ~9 VR	Adisas (4)
E. 5	M.P (3,5)

(2)((4.0)) (2) (2) (2)	
	70 1
1 0 1 1 1	
5. S M V (1 4)	
6. Sv 9 Adisco (5)	. 1
the state of the s	7
aa) (p1~9), (R~49), (Rvs), (pvs) -4+ 1=+	
L. P1~9	h
2. R-09	
	h (
Z. K. III.	
1 (Pv~9) (~9 + R) (P+S) ~R /=S	
6 V ~9	
. 29 -A R 9-11 - (+2-8-) Market 1000 Mark	```
P-AS	
\sim R	, , , , , , , , , , , , , , , , , , ,
9 M.+ (2,4)	
P S.D (1,5)	
S M P (3,6)	
	4
	٩
7	G. Sv 9 Adisco (5) a a) (p1~9), (R ~9), (Rvs), (pvs) ~4 1=4 L. p1~9 2. R ~9 3. Rvs 4. (pvc) ~A+ 5. ~9 Simplificação (1) 6. ~R M.H (2,5) 7. S S.D (3,6) 7. Pvs Adisco (7) 9. H.P (4,1) 1. (pv~9), (~9 ~ R), (p ~ s), ~R 1=s - P ~ A - P ~ A - P ~ S - R 9 M. + (2,4) P S.D (2,5)

CC) (p-29), (9-202), ~~R, (PVISA+)11=5
1. P-19
2. 9-12 aR
3. ~ R
4. PV(SA+))
5. R (Caribolencia (3)
6. ~ 9 $M.+(2.4)$
7. ~ P M. + (2,6)
J. (S1+) Silogimo Ding (47)
9. Simplificação (p)
(a, b,
$(\mathcal{O}_{\mathcal{O}})(\mathcal{O}_{\mathcal{O}}), (\mathcal{O}_{\mathcal{A}}S), (\mathcal{O}_{\mathcal{A}}S), \sim S = (\mathcal{R}\Lambda(\mathcal{O}_{\mathcal{V}}g))$
2. Pv 9
2. 9 - 1 R 3. P-1 S
y ~ S
5. ~P M + (3.4)
6. 9 5.0(1,5)
7. R M.P(2,6)
8. R 1 (P v 9) Confunção (1,7)
ee) (~PV~9), (~9-12 ~R), (~P-A+), + 1= ~R ~ ~ +
1. ~ PV ~9
2. 29 -D ~R
3. ~p-4 +
4. ~t
5- P M. +(3,4)
$6. \sim 9 \qquad S.p(1,5)$
7, ~R M.P(2,6)
8 -R 1 - + Confunção (7,4)

(1) (R-4+) (S-49), (+vg) +~P, (RVS) =P
$1. (n-\Delta +)$
2. (J-49)
3. (+v9) -2~9
4. (Rvs)
5. (tv91 D.C(2,2,4)
6. ~p M.p (3,5)
99)(p-1 -9) (ng -1 ~s) ((p-1 ~s) -2 ~t), R-2+1=-1
1. p-1 ~9
2 ~ 4 ~ 5
3. [[p-0 ~]] -ot
4. RAt
5. P-1~3 (S. H (1,2)
6. ~+ M.P(3,5)
7. ~R M.+(4,6)
HH 1((pvg)-A-R), (S-EP), (+-A9), (Sv+) 1= UV NR
1. ((p vg) - > ~ R
2. S-4 p 3. + -49
5. Pvg (S. # [2,3,4]
6. ~R M. P (1,5)
7. V V 2R Adição (6)
1. V V 1. 11. V 1. V 1. V 1. V 1. V 1.