Form: I-AAA (15, 19,	24)	Form: II-AAA	Form: III-AAA	Form: IV-AAA
All M is P.  All S is M.  All S is M.  All S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > Mx)$ $(\forall x) (Sx > Px)$ All S is P. $(\forall x) (Sx > Px)$ All S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > Px)$ $(\forall x) (Sx > Px)$ $(\forall x) (Sx > Px)$ All S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > Px)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2     1     1     0     1     1     0       3     1     0     1     0*     0*     1       4     1     0     0     1     0*     0       5     0     1     1     1     1     1	All M is P. All M is S. ∴ All S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Mx > Px)$ $(\forall x) (Xx > Px)$ $(\forall x) (Xx > Px)$ $(∀x) (Xx > Px)$	All P is M. All M is S. ∴ All S is P. $(\forall x) (Px > Mx)$ ∴ $(\forall x) (Sx > Px)$
Form: I-AAE  All M is P.  All S is M.  All S is not P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > Mx)$ $(\forall x) (Sx > 7x)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3     1     0     1     0*     0*     0       4     1     0     0     1     0*     1       5     0     1     1     1     1       5     0     1     0     1     1     1	Form: III-AAE  All M is P.  All M is S.  All S is not P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > "Px)$ Form: III-AAE $3                                   $	Form: IV-AAE  All P is M.  All M is S.  All S is not P. $(\forall x) (Px > Mx)$ $(\forall x) (Mx > Sx)$ $(\forall x) (Sx > ^px)$ All M is S. $(\forall x) (Sx > ^px)$ All D is M.  All M is S. $(\forall x) (Px > Mx)$ $(\forall x) (Px > Mx)$ $(\forall x) (Mx > Sx)$ $(\forall x) (Sx > ^px)$ All D is M.  S M P P P M M > S S > ^px  1 1 1 1 1 1 1 1 0  1 1 1 1 1 1  1 0  All D is M.  S M P P > M M > S S > ^px  1 1 1 1 1 1 1 0  All D is M.  S M P P > M M > S S > ^px  1 1 1 1 1 1 1 0  All D is M.  S M P P > M M > S S > ^px  1 1 1 1 1 1 1 0  All D is M.  S M P P > M M > S S > ^px  1 1 1 1 1 1 1 0  All D is M.  S M P P > M M > S S > ^px  1 1 1 1 1 1 1 1 1  All D is M.  S M P P P > M M > S S > ^px  1 1 1 1 1 1 1 1 1  All D is M.  S M P P P > M M > S S > ^px  I I I I I I I I I I I I I I I I I I I
All M is P.  All S is M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is P. $(x) (Mx > Px)$ $(x) (Mx > Px)$ ∴ $(x) ($	1 0 All S is M. 2  1 1*		Form: III-AAI (19, 24)  All M is P. All M is S. Some S is P. $(\forall x) (Mx > Px) (\exists x) (\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ Form: III-AAI (19, 24) $0 \forall x \exists x$	Form: IV-AAI (19, 24) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

	Form: I-AEA	Form: II-AEA	Form: III-AEA	Form: IV-AEA
		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
All M is P.		All P is M.	All M is P. 1 1 1 1 1 0* 1	S M P   P > M   M > "S   S > P   All P is M.
All S is not M.	2 1 1 0 0* 0* 0	All S is not M. 2 1 1 0 1 0* 0	All M is not S. 2 1 1 0 0* 0* 0	All M is not S. 2 1 1 0 1 0* 0
	3 1 0 1 1 1 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	∴ All S is P. 3 1 0 1 1 1 1	∴ All S is P. 3 1 0 1 0* 1 1
••	4 1 0 0 1 1 0	4 1 0 0 1 1 0	4 1 0 0 1 1 0	4 1 0 0 1 1 0
$(\forall x) (Mx > Px)$	5 0 1 1 1 1 1	$(\forall x) (Px > Mx)$ 5 0 1 1 1 1	$(\forall x) (Mx > Px)$ 5 0 1 1 1 1	$(\forall x) (Px > Mx)$ 5 0 1 1 1 1
$(\forall x) (Sx > Mx)$	6 0 1 0 0* 1 1	$(\forall x) (Sx > Mx)$ 6 0 1 0 1 1	$(\forall x) (Mx > "Sx)$ 6 0 1 0 0* 1 1	$(\forall x) (Mx > "Sx)                                   $
$\therefore (\forall x) (Sx > Px)$	7 0 0 1 1 1 1	∴ $(\forall x)(Sx > Px)$ 7 0 0 1 $0^*$ 1 1	$\therefore (\forall x) (Sx > Px)  \boxed{7}  \boxed{0}  \boxed{0}  \boxed{1}  \boxed{1} \qquad \boxed{1}$	∴ $(\forall x)(Sx > Px)$ 7 0 0 1 0* 1 1
	8 0 0 0 1 1 1	8 0 0 0 1 1 1	8 0 0 0 1 1 1	8 0 0 0 1 1 1
	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
	Form: I-AEE	Form: II-AEE (15, 19, 24)	Form: III-AEE	Form: IV-AEE (15, 19, 24)
		A A A A	3 3 3   A   A   A	A A A
	S M P M > P S > "M S > "P	S M P P > M S > "M S > "P	S M P M>P M>°S S>°P	S M P P M M > "S S > "P
	1 1 1 1 0* 0	All P is M. 1 1 1 1 0* 0	All M is P. 1 1 1 1 0* 0	All P is M. 1 1 1 1 0* 0
All S is not M.	2 1 1 0 0* 0* 1	All S is not M. 2 1 1 0 1 0* 1	All M is not S. 2 1 1 0 0* 0* 1	All M is not S.  All S is not P.  3 1 0 1 0* 1 0* 1 0* 1
∴ All S is not P.	3     1     0     1     1     1     0       4     1     0     0     1     1     1	∴ All S is not P. 3 1 0 1 0* 1 0 4 1 0 0 1 1 1	∴ All S is not P. 3 1 0 1 1 1 0 1 4 1 0 1 1 1 1 1 1 1 1 1 1	$\therefore$ All S is not P. $\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$(\forall x) (Mx > Px)$	5 0 1 1 1 1 1	$(\forall x) (Px > Mx) \begin{vmatrix} 4 & 1 & 0 & 0 & 1 & 1 & 1 \\ 5 & 0 & 1 & 1 & 1 & 1 & 1 \end{vmatrix}$	$(\forall x) (Mx > Px)$ 5 0 1 1 1 1 1	$(\forall x) (Px > Mx)$ 5 0 1 1 1 1 1
$(\forall x)(\exists x > \exists x)$	6 0 1 0 0* 1 1	$(\forall x)(\exists x > \exists x)$ 6 0 1 0 1 1 1	$(\forall x) (Mx > Tx) = 0 = 0 = 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1$	$(\forall x) (\exists x) \exists x = 0$ $(\forall x) (\exists x) $
$\therefore \frac{(\forall x) (Sx > ^{n}Px)}{(\forall x) (Sx > ^{n}Px)}$	7 0 0 1 1 1 1	$\therefore (\forall x) (Sx > ^{\circ}Px)                                    $	$\therefore (\forall x) (Sx > ^{\circ}Px)  7  0  0  1  1  1  1$	$(\forall x) (Sx > ^{\circ}Px) \qquad 7 \qquad 0 \qquad 0 \qquad 1 \qquad 0^{*} \qquad 1 \qquad 1$
	8 0 0 0 1 1 1	8 0 0 0 1 1 1	8 0 0 0 1 1 1	8 0 0 0 1 1 1
	1 1 1 1 0	1 1 1 1 1	1 1 1 1 0	1 1 1 1 1
	Form: I-AEI	Form: II-AEI	Form: III-AEI	Form: IV-AEI
	Form: I-AEI	Form: II-AEI	Form: III-AEI	Form: IV-AEI
All M is P.	B B B B B B B B B B B B B B B B B B B	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3 3 3   A   A   3	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
All S is not M.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
All S is not M. ∴ Some S is P.	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	All P is M. All S is not M. ∴ Some S is P.	All M is P. All M is not S. ∴ Some S is P.	All P is M. All M is not S. ∴ Some S is P.
All S is not M. ∴ Some S is P. $(\forall x) (Mx > Px)$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $\begin{vmatrix} 3 & 3 & 3 & \forall & \forall & \exists \\ 5 & M & P & P > M & S > ^*M & S \wedge P \\ 1 & 1 & 1 & 1 & 1 & 0^* & 1^* \\ 2 & 1 & 1 & 0 & 1 & 0^* & 0 \\ 3 & 1 & 0 & 1 & 0^* & 1 & 1^* \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \end{vmatrix}$	All M is P. All M is not S. ∴ Some S is P. $(∀x) (Mx > Px)$ $\begin{vmatrix} 3 & 3 & 3 & ∀ & ∀ & 3 \\ 8 & M & P & M > P & M > R & S & S \land P \\ 1 & 1 & 1 & 1 & 1 & 0^* & 1^* \\ 2 & 1 & 1 & 0 & 0^* & 0^* & 0 & 0 \end{vmatrix}$ $3 & 1 & 0 & 1 & 1 & 1 & 1^* \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 & 0 \end{vmatrix}$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $\begin{vmatrix} 3 & 3 & 3 & \forall & \forall & \exists \\ 5 & M & P & P > M & M > \tilde{x}S & S \land P \\ 1 & 1 & 1 & 1 & 1 & 0^* & 1^* \\ 2 & 1 & 1 & 0 & 1 & 0^* & 0 \\ 3 & 1 & 0 & 1 & 0^* & 1 & 1^* \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \\ ( \forall x) (Px > Mx) & 5 & 0 & 1 & 1 & 1 & 0 \end{vmatrix}$
All S is not M.  Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All M is P. All M is not S. ∴ Some S is P. $(∀x) (Mx > Px)$ $(∀x) (Mx > 7x)$ $(x) (Xx) (Xx) (Xx)$ $(x) (Xx) (Xx) (Xx)$ $(x) (x) (Xx) (Xx) (Xx)$ $(x) (x) (x) (x) (x) (x)$ $(x) (x) (x) (x) (x) (x) (x)$ $(x) (x)$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\forall x) (Mx > ^*Sx)$ $(∀x) (Mx > ^*Sx)$ $(∀x) (Mx > ^*Sx)$ $(∀x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ $(∀x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ $(∀x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$
All S is not M. $\therefore \text{ Some S is P.}$ $(\forall x) (Mx > Px)$ $(\forall x) (Sx > \text{`Mx})$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists \exists \exists \exists \exists \forall \forall \exists x) \exists x \land x$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ $( (x) (x) (x) (x) (x) (x) (x) (x) (x) (x$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\forall x) (Mx > ^*Sx)$ $(∃x) (Sx ∧ Px)$ $\begin{vmatrix} \exists & \exists & \exists & \forall & \forall & \exists \\ S & M & P & P > M & M > ^*S & S ∧ P \\ 1 & 1 & 1 & 1 & 1 & 0 * & 1 * \\ 2 & 1 & 1 & 0 & 1 & 0 * & 0 \\ 3 & 1 & 0 & 1 & 0 * & 1 & 1 * \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \\ 5 & 0 & 1 & 1 & 1 & 1 & 0 \\ 1 & 1 & 0 & 0 & 1 & 1 & 0  \end{vmatrix}$
All S is not M.  Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Px)$ $(\exists \exists \exists \exists \exists \forall \forall \forall \exists \exists x \wedge Px \wedge Px \wedge Px \wedge Px \wedge Px \wedge Px \wedge P$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not S.  7 0 0 1 1 1 0 0*  8 $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ All D is M. $(\exists x) (\exists $
All S is not M.  Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Sx ^ Mx)$ $(∀x) (Sx ^ Mx)$ $(∀x) (Sx ^ Mx)$ $(∀x) (Sx ^ Mx)$ $(∀x) (Tx > Mx)$ $(x) (Tx > Mx)$ $(x$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not S.  1 1 1 1 1 1 1 0°* 1*  2 1 1 0 0°* 0°* 0°  3 1 0 1 1 1 1 1 1 1°  4 1 0 0 1 1 1 0 0°  5 0 1 1 1 1 1 0 0°  6 0 1 0 0°* 1 0°  7 0 0 1 1 1 0 0°  8 0 0 0 0 1 1 1 0  1 1 1 1 0	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > "Sx)$ $(∀x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∀x) (Tx) (Tx) (Tx) (Tx) (Tx) (Tx) (Tx) (T$
All S is not M.  Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$	∃ ∃ ∃ ∀ ∀ ∃   S M P M > P S > "M S ∧ P	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > °Sx)$ $∴ (∃x) (Sx ∧ Px)$ $(∀x) (Fx > Mx)$ $(∀x) (F$
All S is not M.  Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$	∃ ∃ ∃ ∀ ∀ ∃   S M P M > P S > "M S ∧ P	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Sx > ^mx)$ $(x) (x) (x) (x)$ $(x$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not S. ∴ Form: III-AEO	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ $(∀x) (Sx ∧ Px)$ $(∀x) (Tx) (Tx) (Tx) (Tx) (Tx) (Tx) (Tx) (T$
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∀ ∀ ∃   S M P M > P S > "M S ∧ P	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > °Sx)$ $∴ (∃x) (Sx ∧ Px)$ $(∀x) (Fx > Mx)$ $(∀x) (F$
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > ^mx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∀ ∀ ∃   S M P M > P S > "M S ∧ P	All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. All P is M. All S is not M. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. All S is not M. $(\exists x) (Sx \land Px)$ $(\exists x$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ $(∀x) (Sx ∧ Px)$ $(∀x) (Sx ∧ Px)$ $(∀x) (Sx ∧ Px)$ $(∀x) (Sx ∧ Px)$ $(∀x) (Fx > Mx)$ $(∀x) (Fx$
All S is not M. $\therefore$ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > \text{`Mx})$ $\therefore (\exists x) (Sx \land Px)$ All M is P.		All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Px)$	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ ∴ (∃x) (Sx \ \ Px)  All P is M. All P is M. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $All P is M. All M is not S. (\exists x) (Sx \land Px) ($
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > \text{`Mx})$ ∴ $(\exists x) (Sx \land Px)$ All M is P.  All S is not M. ∴ Some S is not P.		All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. All P is M. All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. All S is not M. ∴ Some S is not P. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land $	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All M is P. $(\exists x) (Sx \land Px)$ $(\exists x) $	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ $All P is M. All M is not S. ∴ Some S is not P. (\exists x) (Sx \land Px) (\exists x) $
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > \text{`Mx})$ ∴ $(\exists x) (Sx \land Px)$ All M is P.  All S is not M. ∴ Some S is not P. $(\forall x) (Mx > Px)$		All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Px)$	All M is P. All M is not S. ∴ Some S is P. $(∀x) (Mx > Px)$ ∴ $(∃x) (Sx \land Px)$ $All M is not S.$ ∴ All M is P. $(∀x) (Mx > Px)$ $(∀x) (Xx) (Xx) (Xx)$ $(∀x) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (X$	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > {}^mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P.  All S is not M. ∴ Some S is not P. $(\forall x) (Mx > Px)$ $(\forall x) (Mx > Px)$ $(\forall x) (Sx > {}^mx)$		All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Px)$	All M is P. All M is not S. ∴ Some S is P. $(∀x) (Mx > Px)$ ∴ $(∀x) (Mx > Px)$ $(∀x) (Xx) (Xx)$ $(Xx) (Xx) (Xx) (Xx)$ $(Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx)$ $(Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx) $	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\forall x) (Mx > ^*Sx)$ ∴ (∃x) (Sx $\land$ Px) $(\exists x) (Sx \land Px)$
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > {}^mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P.  All S is not M. ∴ Some S is not P. $(\forall x) (Mx > Px)$ $(\forall x) (Mx > Px)$ $(\forall x) (Sx > {}^mx)$		All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Px)$ $\exists \exists \exists \exists \forall \forall \forall \exists \exists \land $	All M is P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ $All M is not S.$ ∴ Some S is P. $(\forall x) (Mx > Px)$ ∴ $(\exists x) (Sx \land Px)$ $($	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ ∴ (∃x) (Sx $\land$ Px)  All P is M. All P is M. $(\forall x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ ∴ (∃x) (Sx $\land$ Px) $(\exists x) (Sx \land Px)$ All P is M. All M is not S. ∴ Some S is not P. $(\forall x) (Px > Mx)$ $(∀x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ $(∃x) (Sx \land Px) (\exists x) (Sx \land Px) (\exists x) (Sx \land Px) (\exists x) (Sx \land Px) (∀x) (Px > Mx) (∀x) $
All S is not M.  ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\forall x) (Sx > {}^mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P.  All S is not M. ∴ Some S is not P. $(\forall x) (Mx > Px)$ $(\forall x) (Mx > Px)$ $(\forall x) (Sx > {}^mx)$		All P is M. All S is not M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Px)$	All M is P. All M is not S. ∴ Some S is P. $(∀x) (Mx > Px)$ ∴ $(∀x) (Mx > Px)$ $(∀x) (Xx) (Xx)$ $(Xx) (Xx) (Xx) (Xx)$ $(Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx)$ $(Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx) (Xx) $	All P is M. All M is not S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(∀x) (Mx > ^*Sx)$ ∴ (∃x) (Sx $\land$ Px) $(∃x) (Sx \land Px)$ $(∃x) (Sx \land Px)$ $(∀x) (Px > Mx)$ $(∃x) (Sx \land Px)$ $(∃x) (x) (x) (x) (x)$ $(∃x) (x) (x) (x) (x) (x)$ $(∃x) (x) (x) (x) (x) (x) (x) (x)$ $(∃x) (x) (x) (x) (x) (x) (x) (x) (x) (x) ($

ſ	Form: I-AIA	Form: II-AIA	Form: III-AIA	Form: IV-AIA
All M is P.	$S$ $M$ $P$ $M > P$ $S \wedge M$ $S > P$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$egin{array}{ c c c c c c c c c c c c c c c c c c c$	$S$ $M$ $P$ $P > M$ $M \wedge S$ $S > P$
Some S is M.	1     1     1     1     1     1       2     1     1     0     0*     1     0	All P is M.	All M is P. 1 1 1 1 1 1 1 1 1 Some M is S. 2 1 1 0 0* 1 0	All P is M. 1 1 1 1 1 1 1 1 Some M is S. 2 1 1 0 1 1 0
∴ All S is P.	3     1     0     1     1     0     1       4     1     0     0     1     0     0	$\therefore \text{All S is P.} \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\therefore$ All S is P. $\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\therefore$ All S is P. $\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	5 0 1 1 1 0 1	$(\forall x) (Px > Mx)$ 5 0 1 1 1 0 1	$(\forall x) (Mx > Px)$ 5 0 1 1 1 0 1	$(\forall x) (Px > Mx)$ 5 0 1 1 1 0 1
$\frac{(\exists x) (Sx \land Mx)}{(\forall x) (Sx > Px)}$	6         0         1         0         0         1           7         0         0         1         1         0         1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	8 0 0 0 1 0 1	8 0 0 0 1 0 1	8 0 0 0 1 0 1	8 0 0 0 1 0 1
	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Г	Form: I-AIE	Form: II-AIE	Form: III-AIE	Form: IV-AIE
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	1 1 1 1 1 0	All P is M. 1 1 1 1 1 0	All M is P. 1 1 1 1 1 0	All P is M. 1 1 1 1 1 0
Some S is M. ∴ All S is not P.	2         1         1         0         0*         1         1           3         1         0         1         1         0         0	Some S is M. 2 1 1 0 1 1 1 1 All S is not P. 3 1 0 1 0* 0 0	Some M is S.     2     1     1     0     0*     1     1       ∴ All S is not P.     3     1     0     1     1     0     0	Some M is S. ∴ All S is not P.  3 1 0 1 0* 0 0
$(\forall x) (Mx > Px)$	4 1 0 0 1 0 1	4 1 0 0 1 0 1	4 1 0 0 1 0 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\frac{(\exists x)(\exists x)(\exists x \land \exists x)}{(\exists x)(\exists x)(\exists x)(\exists x)(\exists x)(\exists x)(\exists x)(\exists x)$	5     0     1     1     0     1       6     0     1     0     0*     0     1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$(\exists x) (Mx \land Sx) \qquad 6 \qquad 0 \qquad 1 \qquad 0 \qquad 1$
L	7         0         0         1         1         0         1           8         0         0         0         1         0         1			
l	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
	Form: I-AII (15, 19, 24)	Form: II-AII	Form: III-AII (15, 19, 24)	Form: IV-AII
[	Form: I-AII (15, 19, 24)	Form: II-AII	Form: III-AII (15, 19, 24)	Form: IV-AII
All M is P.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
All M is P. Some S is M.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some S is M.	∃     ∃     ∃     ∃       S     M     P     M > P     S ∧ M       1     1     1     1     1      3   3   3   4   5   5   5   5   5   5   5   5   5	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\forall x) (Px > Mx)$ $(\forall x) (Px > Mx)$ $(x) (Px > Mx)$	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \wedge Mx)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Mx)$	All M is P. Some M is S. ∴ Some S is P. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is M. Some M is S. ∴ Some S is P.
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ $∴ (\exists x) (Sx \land Px)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) $	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P.
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ $∴ (\exists x) (Sx \land Px)$	∃     ∃     ∃     ∃       S     M     P     M > P     S ∧ M     S ∧ P       1     1     1     1     1     1*       2     1     1     0     0*     1     0     1*       3     1     0     1     1     0     1*       4     1     0     0     1     0     0       5     0     1     1     0     0       6     0     1     0     0     0       7     0     0     1     1     0     0	All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ ∴ $(\exists x) (Sx \wedge Mx)$ ∴ $(\exists x) (Sx \wedge Px)$ $(\exists x)$	All M is P. Some M is S. ∴ Some S is P. $(∀x) (Mx > Px)$ ∴ $(∃x) (Sx ∧ Px)$	All P is M. Some M is S. ∴ Some S is P. $(∀x) (Px > Mx)$ $(∃x) (Mx ∧ Sx)$ $(∃x) (Sx ∧ Px)$ $(∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) $
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ $∴ (\exists x) (Sx \land Px)$	∃       ∃       ∃       ∀       ∃       ∃         S       M       P       M > P       S ∧ M       S ∧ P         1       1       1       1       1       1*         2       1       1       0       0*       1       0         3       1       0       1       1       0       1*         4       1       0       0       1       0       0         5       0       1       1       1       0       0         6       0       1       0       0       0         7       0       0       1       1       0       0         8       0       0       0       1       0       0         1       1       1       1       0       0	All P is M. Some S is M. Some S is P. $(∀x) (Px > Mx)$ $(∃x) (Sx ∧ Px)$ $(∃x) (∃x) (Sx ∧ Px)$ $(∃x) (∃x) (Sx ∧ Px)$ $(∃x) ($	All M is P. Some M is S. ∴ Some S is P. $(∀x) (Mx > Px)$ $(∃x) (Sx ∧ Px)$	All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x)$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ $∴ (\exists x) (Sx \land Px)$	∃     ∃     ∃     ∃     ∃       S     M     P     M > P     S ∧ M     S ∧ P       1     1     1     1     1     1*       2     1     1     0     0*     1     0     1*       4     1     0     0     1     0     0     0       5     0     1     1     1     0     0     0       6     0     1     0     0     0     0     0       7     0     0     1     1     0     0       8     0     0     0     1     0     0       1     1     1     1     0     0	All P is M. Some S is M. ∴ Some S is P. $(∀x) (Px > Mx)$ $∴ (∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (x) (x) (x) (x) (x) (x) (x) (x) (x) ($	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x)$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P.	∃ ∃ ∃ ∀ ∃ ∃   ∃   ∃   S M P M > P S ∧ M S ∧ P   1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M.  All P is M. $(\exists x) (\exists x) (\exists$	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $(∀x) (Px > Mx)$ $(∃x) (Mx ∧ Sx)$ ∴ $(∃x) (Sx ∧ Px)$ All P is M. $All P is M.$ $(∃x) (Mx ∧ Sx)$ $(∃x) (Tx) (Tx) (Tx)$ $(∃x) (Tx) (Tx) (Tx) (Tx) (Tx) (Tx) (Tx) (T$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P.	∃ ∃ ∃ ∀ ∃ ∃   ∃   ∃   ∃   S M P M > P S ∧ M S ∧ P   1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	All P is M. Some S is M.	All M is P. Some M is S. ∴ Some S is P. $ (\forall x) (Mx > Px) $ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $ (\exists x) (xx) (xx) (xx) (xx) (xx) (xx) (xx$	All P is M. Some M is S. ∴ Some S is P. $(∀x) (Px > Mx)$ $(∃x) (Mx ∧ Sx)$ ∴ $(∃x) (Sx ∧ Px)$ All P is M. Some M is S. ∴ Some S is not P. $All P is M.$ $Some M is S.$ $All P is M.$ $Some M is S.$ ∴ Some S is not P. $All P is M.$ $Some M is S.$ ∴ Some S is not P. $All P is M.$ $Some M is S.$ ∴ Some S is not P.
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P. Some S is M. ∴ Some S is not P.	B   B   B   V   B   B   B   S   M   P   M > P   S \land M   S \land P   1   1   1   1   1   1   1   1   1	All P is M. Some S is M.	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $ (\exists x) (\exists x$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P. Some S is M. ∴ Some S is not P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$		All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. Some S is M. ∴ Some S is M. $(\exists x) (Sx \land Px)$	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ $All P is M. Some M is S. ∴ Some S is P.  (\forall x) (Px > Mx) (\exists x) (Mx \land Sx) (\exists x) (Sx \land Px) (\exists x) (Sx \land Px$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P. Some S is M. ∴ Some S is not P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Mx)$	B   B   B   V   B   B   B   S   M   P   M > P   S \land M   S \land P   1   1   1   1   1   1   1   1   1	All P is M. Some S is M.	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land Sx)$ $(\exists x) (Sx \land Px)$ All P is M. Some M is S. ∴ Some S is not P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx$
Some S is M. ∴ Some S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ All M is P. Some S is M. ∴ Some S is not P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Mx)$		All P is M. Some S is M. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is M. Some S is M. ∴ Some S is M. $(\exists x) (Sx \land Px)$	All M is P. Some M is S. ∴ Some S is P.	All P is M. Some M is S. ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ $All P is M. Some M is S. ∴ Some S is P.  (\forall x) (Px > Mx) (\exists x) (Mx \land Sx) (\exists x) (Sx \land Px) (\exists x) (Sx \land Px$

Form: I-AOA  All M is P.  Some S is not M.  ∴ All S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land `Mx)$ ∴ $(\forall x) (Sx > Px)$ Brown: I-AOA $(\exists x) \exists \exists \exists \forall \forall \exists \forall \forall \exists \forall \forall \exists \forall \forall \exists \forall \exists \forall \exists $	Form: II-AOA  All P is M. Some S is not M. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \wedge "Mx)$ $(\exists x) (Sx \wedge "Mx)$ $(\forall x) (Sx > Px)$ $(\exists x) (Sx \wedge "Mx)$ $(\exists x) ($	Form: III-AOA  All M is P.  Some M is not S.  All S is P. $(\forall x) (Mx > Px)$ $(\exists x) (Mx \land "Sx)$ $(\forall x) (Sx > Px)$ All M is P. $(\exists x) (Mx \land "Sx)$ $(\exists x) (Mx \land "S$	Form: IV-AOA  All P is M.  Some M is not S.  All S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land ``Sx)$ $(\forall x) (Sx > Px)$ All D is M.  Some M is not S. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land ``Sx)$ $(\forall x) (Sx > Px)$ All D is M.  Some M is not S.  1 1 1 1 1 1 1 1 0 1 0 1  2 1 1 1 0 1 0 0 1  4 1 0 0 1 1 0 0  5 0 1 1 1 1 1 1  7 0 0 1 0 0 1  8 0 0 0 0 1 0 1  1 1 1 1 1 1  1 0
Form: I-AOE  All M is P.  All S is not P. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \wedge ``Mx)$ $(\forall x) (Sx > ``Px)$ Form: I-AOE $(\exists x) \exists x \exists x y y y \exists x y y y y y y y y y y y$	Form: II-AOE $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: III-AOE    3   3   3   $\forall$   3   $\forall$     S   M   P   M > P   M \(^{8}S \) S > ^{8}P     All M is P.   1   1   1   1   1   1   0   0     Some M is not S.   2   1   1   0   0   0     ∴ All S is not P.   3   1   0   1   1   1   0   0     $(\forall x) (Mx > Px) = (\exists x) (Mx \land ^{8}Sx) = (\exists $	Form: IV-AOE  All P is M.  Some M is not S.  All S is not P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land ``Sx)$ $(\forall x) (Sx > ``Px)$ Form: IV-AOE $S M P P > M M \land ``S S > ``P P P M M \land ``S S > ``P M M \land ``S M M M M M M M M M M M M M M M M M M$
Form: I-AOI  All M is P. Some S is not M. $(\forall x) (Mx > Px)$ $(\exists x) (Sx \land Px)$ $(\exists $	Form: II-AOI  All P is M. Some S is not M. $(\forall x) (Px > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists$	Form: III-AOI $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: IV-AOI  All P is M.  Some M is not S.  ∴ Some S is P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \land "Sx)$ $(\exists x) (Sx \land Px)$ Borner: IV-AOI $\exists \exists \exists \exists \exists \forall \forall \exists \exists$
Form: I-AOO	Form: II-AOO (15, 19, 24)  All P is M.  Some S is not M.  ( $\forall x$ ) ( $Px > Mx$ )  ( $\exists x$ ) ( $Sx \land ``Mx$ )  ( $\exists x$ ) ( $Sx \land ``Px$ )  Form: II-AOO (15, 19, 24) $\exists \exists \exists \exists \exists \forall \forall \exists \exists$	Form: III-AOO	Form: IV-AOO  All P is M.  Some M is not S.  Some S is not P. $(\forall x) (Px > Mx)$ $(\exists x) (Mx \wedge "Sx)$ $(\exists x) (Sx \wedge "Px)$ Form: IV-AOO $\exists \exists \exists \exists \exists \forall \forall \exists \exists$

Form: I-EAA  All M is not P.  All S is M.  ∴ All S is P. $(\forall x) (Mx > ``Px)$ ∴ $(\forall x) (\forall x) (Sx > Px)$ Form: I-EAA $(\exists  \exists  \exists  \forall  \forall  \forall  \forall  \forall  \forall  \exists  \exists$	Form: II-EAA  All P is not M.  All S is M.  All S is P. $(\forall x) (Px > ``Mx)$ $(\forall x) (Sx > Px)$ Form: II-EAA	Form: III-EAA    3   3   3   $\forall$   $\forall$   $\forall$     S   M   P   M > "P   M > S   S > P     All M is S.	Form: IV-EAA    3   3   3   $\forall$   $\forall$   $\forall$     S   M   P   P > \(^{1}\)M   M > S   S > P    All P is not M.   1   1   1   1   0   1   1   1     All M is S.   2   1   1   0   1   1   1   0     \(  \text{\$\
8 0 0 0 1 1 1 0  Form: I-EAE (15, 19, 24)  Form: I-EAE (15, 19, 24)  Form: I-EAE (15, 19, 24)  □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: III-EAE  Form: III-EAE  All M is not P.  All M is S.  All S is not P. $(\forall x) (Mx > `Px)$ $(\forall x) (Sx > `Px)$ $(\exists \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	Form: IV-EAE  Form: IV-EAE  All P is not M.  All M is S.  All S is not P. $(\forall x) (Px > ``Mx) (\forall x) (Mx > Sx)$ $(\forall x) (Sx > ``Px)$
Form: I-EAI  Form: I-EAI  All M is not P.  All S is M.  Some S is P. $(\forall x) (Mx > ``Px)$ $(\exists x) (\exists x) (Sx \land Px)$ $(\exists x) (\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (\exists $	Form: II-EAI  Form: II-EAI  All P is not M.  All S is M.  Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \wedge Px)$ $(\exists x) (\exists x) (x) (x) (x) (x) (x) (x) (x) (x) (x) $	Form: III-EAI  All M is not P.  All M is S.  Some S is P. $(\forall x) (Mx > ^nPx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (x) (x) (x) (x) (x) (x) (x) (x) (x) $	Form: IV-EAI  Form: IV-EAI    3   3   3   7   7   7   0   0   1   1   0
Form: I-EAO (24)  All M is not P.  All S is M.  Some S is not P. $(\forall x) (Mx > {}^{'}Px)$ $(\exists x) (Sx \wedge {}^{'}Px)$ Brown: I-EAO (24) $\exists \exists \exists \exists \exists \forall \forall \forall \exists \exists \forall \forall \forall \exists \exists \forall \forall \exists \exists \exists \exists \exists \exists \forall \forall \exists \exists$	Form: II-EAO (24)  All P is not M.  All S is M.  Some S is not P. $(\forall x) (Px > ^mx)$ $(\forall x) (Sx > ^mx)$ $(\exists x) (Sx \wedge ^mPx)$ $(\exists x) (Sx \wedge ^mPx)$ $(\exists x) (Sx \wedge ^mPx)$ $(0^+ 1) 1 1 1 1 1 0^* 1 0^* 1 0^* 1^* 1^* 1^* 1^* 1^* 1^* 1^* 1^* 1^* 1$	Form: III-EAO (19, 24) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: IV-EAO (19, 24) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

Form: I-EEA	Form: II-EEA	Form: III-EEA	Form: IV-EEA
3   3   A   A   A		3 3 3 A A A	
S M P M>"P S>"M S>P	S M P P>"M S>"M S>P	S M P M>"P M>"S S>P	S M P P > "M M > "S S > P
All M is not P. 1 1 1 1 0* 0* 1	All P is not M. 1 1 1 1 0* 0* 1	All M is not P. 1 1 1 1 0* 0* 1	All P is not M. 1 1 1 1 0* 0* 1
All S is not M. 2 1 1 0 1 0* 0	All S is not M. 2 1 1 0 1 0* 0	All M is not S. 2 1 1 0 1 0* 0	All M is not S. 2 1 1 0 1 0* 0
∴ All S is P. 3 1 0 1 1 1 1 1	∴ All S is P. 3 1 0 1 1 1 1	∴ All S is P. 3 1 0 1 1 1 1	∴ All S is P. 3 1 0 1 1 1 1
4 1 0 0 1 1 0	4 1 0 0 1 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0	4 1 0 0 1 1 0	4 1 0 0 1 1 0
$(\forall x) (Mx > ^mPx)$	$(\forall x) (Px > ^m x)$ 5 0 1 1 0* 1 1	$(\forall x) (Mx > ^nPx)$ 5 0 1 1 0* 1 1	$(\forall x) (Px > ^mMx)                                    $
$(\forall x) (Sx > Mx) = 6 = 0 = 1 = 0 = 1 = 1 = 1$	$\frac{(\forall x) (Sx > ^m Xx)}{(\forall x) (Sx > ^m Xx)} \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\frac{(\forall x) (Mx > ^{\prime}Sx)}{(\forall x) (Gx > Px)} = \begin{bmatrix} 6 & 0 & 1 & 0 & 1 & 1 & 1 \\ \hline & & & & & & & & & & & & & & & & & &$	$\frac{(\forall x) (Mx > "Sx)}{(\forall x) (Gx > Px)} = \frac{6}{7} = 0 = 0 = 1 = 1 = 1$
$\therefore (\forall x) (Sx > Px)  \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\therefore (\forall x) (Sx > Px)                                 $	$\therefore (\forall x) (Sx > Px)  \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\therefore (\forall x) (Sx > Px) \begin{vmatrix} 7 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0 & 1 & 1 & 1 \end{vmatrix}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 1 1 1 0	1 1 1 1 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-EEE	Form: II-EEE	Form: III-EEE	Form: IV-EEE
	J A A A A		
S M P M>"P S>"M S>"P	S M P P> "M S> "M S> "P	S M P M>"P M>"S S>"P	S M P P>"M M>"S S>"P
All M is not P. 1 1 1 1 0* 0* 0	All P is not M. 1 1 1 1 0* 0* 0	All M is not P. 1 1 1 1 0* 0* 0	All P is not M. 1 1 1 1 0* 0* 0
All S is not M. 2 1 1 0 1 0* 1	All S is not M. 2 1 1 0 1 0* 1	All M is not S. 2 1 1 0 1 0* 1	All M is not S. 2 1 1 0 1 0* 1
∴ All S is not P. 3 1 0 1 1 1 0	∴ All S is not P. 3 1 0 1 1 1 0	All S is not P. 3 1 0 1 1 0	All S is not P. 3 1 0 1 1 0
4 1 0 0 1 1 1	4 1 0 0 1 1 1	4 1 0 0 1 1 1	4 1 0 0 1 1 1
$(\forall x) (Mx > ^{m}Px)$ 5 0 1 1 0* 1 1	$(\forall x) (Px > Mx)$ 5 0 1 1 0* 1 1	$(\forall x) (Mx > Px)                                 $	$(\forall x) (Px > Mx)$ 5 0 1 1 0* 1
$(\forall x) (Sx > Mx) \qquad 6 \qquad 0 \qquad 1 \qquad 1 \qquad 1$	$(\forall x) (Sx > Mx) \qquad 6 \qquad 0 \qquad 1 \qquad 1 \qquad 1$	$(\forall x) (Mx > \text{`Sx})  6  0  1  0  1  1  1$	$(\forall x) (Mx > Sx) 6 0 1 0 1 1 1$
$\therefore (\forall x) (Sx > Px)                                 $	$\therefore (\forall x) (Sx > ^mPx)  7  0  0  1  1  1  1$	$\therefore (\forall x) (Sx > ^mPx)  7  0  0  1  1  1  1$	$\therefore (\forall x) (Sx > Px)                                 $
8 0 0 0 1 1 1		8 0 0 0 1 1 1	
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-EEI	Form: II-EEI	Form: III-EEI	Form: IV-EEI
Form: I-EEI	Form: II-EEI      3   3	Form: III-EEI      3   3	Form: IV-EEI
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is not M. All S is not M. ∴ Some S is P.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
All M is not P. All S is not M. ∴ Some S is P.	All P is not M. All S is not M. ∴ Some S is P.	All M is not P. All M is not S. ∴ Some S is P.	All P is not M. All M is not S. ∴ Some S is P.
All M is not P. All S is not M. ∴ Some S is P. $(\forall x) (Mx > ^{x}Px)$ $\begin{vmatrix} \exists & \exists & \exists & \forall & \forall & \exists \\ S & M & P & M > ^{x}P & S > ^{x}M & S \wedge P \\ 1 & 1 & 1 & 1 & 0^{*} & 0^{*} & 1^{*} \\ 2 & 1 & 1 & 0 & 1 & 0^{*} & 0 \\ 3 & 1 & 0 & 1 & 1 & 1 & 1^{*} \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \\ 5 & 0 & 1 & 1 & 0^{*} & 1 & 0 \end{vmatrix}$	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > \text{``Mx})$ $\begin{vmatrix} \exists & \exists & \exists & \forall & \forall & \exists \\ S & M & P & P > \text{``M} & S > \text{``M} & S \wedge P \\ 1 & 1 & 1 & 1 & 0^* & 0^* & 1^* \\ 2 & 1 & 1 & 0 & 1 & 0^* & 0 \\ 3 & 1 & 0 & 1 & 1 & 1 & 1^* \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \\ 5 & 0 & 1 & 1 & 0^* & 1 & 0 \end{vmatrix}$	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ^{x}Px)$ $\begin{vmatrix} 3 & 3 & 3 & \forall & \forall & 3 \\ S & M & P & M > ^{x}P & M > ^{x}S & S \wedge P \\ 1 & 1 & 1 & 1 & 0^{*} & 0^{*} & 1^{*} \\ 2 & 1 & 1 & 0 & 1 & 0^{*} & 0 \\ 3 & 1 & 0 & 1 & 1 & 1 & 1^{*} \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \\ 5 & 0 & 1 & 1 & 0^{*} & 1 & 0 \end{vmatrix}$	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^mMx)$ $\begin{vmatrix} \exists & \exists & \exists & \forall & \forall & \exists \\ S & M & P & P > ^mM & M > ^mS & S \wedge P \\ 1 & 1 & 1 & 1 & 0^* & 0^* & 1^* \\ 2 & 1 & 1 & 0 & 1 & 0^* & 0 \\ 3 & 1 & 0 & 1 & 1 & 1 & 1^* \\ 4 & 1 & 0 & 0 & 1 & 1 & 0 \\ 5 & 0 & 1 & 1 & 0^* & 1 & 0 \end{vmatrix}$
All M is not P. All S is not M.	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > \text{``Mx})$ $(\forall x) (Sx > \text{``Mx})$ $(∀x) (Sx > \text{``Mx})$	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ $(\forall x) (Mx > ``Sx)$ All M is not S. $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Sx)$ All M is not P. $(\exists  \exists  \exists  \forall  \forall  \exists  \exists  \exists  \exists  \exists  $	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^mMx)$ $(∀x) (Mx > ^mSx)$ $(∀x) (Mx > ^mSx)$ $(∀x) (Px > ^mSx)$ $(x) (Px > ^mSx)$
All M is not P. All S is not M.	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \wedge Px)$ $(\exists x) (Sx \wedge$	All M is not P. All M is not S.	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^mXx)$ ∴ $(\exists x) (Sx \land Px)$ All Contact M. $(\exists x) (\exists x) $
All M is not P. All S is not M. ∴ Some S is P. $(\forall x) (Mx > ^nPx)$ $(∀x) (Sx ∧ Px)$ ∴ $(\exists x) (Sx ∧ Px)$ $(\exists x) (Sx ∧ P$	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  7 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	All M is not P. All M is not S.	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All Contact M. $(\exists x) (\exists x) (Sx \land Px)$ $(\exists x) (\exists x)$
All M is not P. All S is not M.	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \wedge Px)$ $(\exists x) (Sx \wedge$	All M is not P. All M is not S.	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^mXx)$ ∴ $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) \exists x \exists x$
All M is not P. All S is not M. ∴ Some S is P. $(\forall x) (Mx > ^nPx)$ $(∀x) (Sx ∧ Px)$ ∴ $(\exists x) (Sx ∧ Px)$ $(\exists x) (Sx ∧ P$	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  7 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	All M is not P. All M is not S.	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All Control M. $(\exists x) (\exists x) (Sx \land Px)$ $(\exists x) (\exists x)$
All M is not P. All S is not M.  ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \land Px)$ Form: I-EEO	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ $(\exists x) (x) (x) (x) (x) (x) (x) (x) (x) (x) $	All M is not P. All M is not S.  Some S is P. $(\forall x) (Mx > ^nPx)$ $(\exists x) (\exists x) (Sx \land Px)$ All M is not S.  1 1 1 1 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0	All P is not M. All M is not S.  Some S is P. $(\forall x) (Px > ^mXx)$ $(\exists x) (Sx \land Px)$ All Control Mark Signary Signar
All M is not P. All S is not M.  ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \wedge Px)$ $(\exists x) (Sx \wedge Px)$ Form: I-EEO $ \begin{vmatrix} \exists & \exists & \exists & \forall & \forall & \exists \\ S & M & P & M > ^{\circ}P & S > ^{\circ}M & S \wedge P \\ 0 & 0 & 1 & 1 & 0^* & 0^* & 1^* \\ 0 & 1 & 1 & 1 & 1 & 1 & 1^* & 1^* \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1^* \\ 0 & 1 & 1 & 0 & 1 & 1 & 1 & 0 \\ 0 & 1 & 1 & 0 & 1 & 1 & 0 \\ 0 & 0 & 1 & 1 & 0 & 1 & 1 & 0 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & $	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > \text{`Mx})$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land$	All M is not P. All M is not S.  Some S is P. $(\forall x) (Mx > ``Px)$ $(\exists x) (\exists x) (Sx \land Px)$ To prove the first section of the section of th	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^mMx)$ ∴ $(\exists x) (Sx \wedge Px)$ $(\exists x) (Sx \wedge $
All M is not P. All S is not M.  ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \wedge Px)$ All M is not P.  All M is not P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \wedge Px)$ All M is not P.  All M is not P. $(\exists x) (\exists x) (\exists$	All P is not M.  All S is not M.  ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All P is not M. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All P is not M.  All P is not M. $(\exists \exists \exists \exists \exists \forall \forall \exists \land \forall \exists \exists \land \forall \exists \exists \exists \forall \exists \exists \forall \exists \exists \exists \exists$	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All M is not P. $(\exists x) (Sx \land Px)$	All P is not M.  All M is not S.  ∴ Some S is P. $(\forall x) (Px > ^mX)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All P is not M. $(\forall x) (Px > ^mX)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M. $(\exists \exists \exists \exists \exists \forall \forall \forall \exists \exists \land $
All M is not P. All S is not M.  ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \wedge Px)$ All M is not P.  All M is not P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \wedge Px)$ All M is not P. All S is not M.  All S is not M. $(\exists x) (\exists x) ($	All P is not M.  All S is not M.  ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All P is not M. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All S is not M.	All M is not P.  All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not P.  All M is not S. $(\forall x) (Mx > ``Px)$ $(∀x) (Mx > ``Px)$ $(∀x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ All M is not P.  All M is not S.  All M is not S. $(\exists x) (\exists x) $	All P is not M.  All M is not S.  ∴ Some S is P. $(\forall x) (Px > ^m X)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All P is not M.  All M is not S.  ∴ Some S is P. $(\forall x) (Px > ^m X)$ $(\forall x) (Mx > ^m Sx)$ ∴ $(\exists x) (Sx \land Px)$ All P is not M.  All M is not S. $(\exists x) (\exists x) ($
All M is not P. All S is not M. ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not P. All S is not M. ∴ Some S is not M. ∴ $(\exists x) (Sx \land Px)$ All M is not P. All S is not M. ∴ Some S is not P. All S is not P.	All P is not M.  All S is not M.  ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M.  All P is not M.  ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M.  All S is not M.  ∴ Some S is not P. $(\exists x) (\exists x)$	All M is not P. All M is not S. ∴ Some S is P.  (∀x) (Mx > "Px) ∴ (∃x) (Sx ∧ Px)  All M is not P. Some S is not P.  3	All P is not M. All M is not S. ∴ Some S is P.  (∀x) (Px > "Mx) ∴ (∃x) (Sx ∧ Px)  All P is not M. All M is not S. ∴ Some S is P.  All P is not M. All M is not S. ∴ (∃x) (Sx ∧ Px)  All P is not M. All M is not S. ∴ Some S is not P.  All D is not M. All M is not S. ∴ Some S is not P.
All M is not P.  All S is not M.  ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not P.  All S is not M.  ∴ Some S is P. $(\forall x) (Mx > ^{\circ}Px)$ ∴ $(\exists x) (Sx \land Px)$ All M is not P.  All S is not M.  ∴ Some S is not P.  All S is not M.  ∴ Some S is not P.  All O I I I O* $(\exists x) (\exists x$	All P is not M.  All S is not M.  ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M.  All P is not M. $(\forall x) (Px > ``Mx)$ $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M.  All S is not M.  ∴ Some S is not P. $(\exists x) (\exists x) ($	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ $(\exists x) (\exists x) $	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$
All M is not P. All S is not M. ∴ Some S is P. $(\forall x) (Mx > ^{x}Px)$ ∴ $(\exists x) (Sx \wedge Px)$ $All M is not P. (\forall x) (Mx > ^{x}Px) ∴ (\exists x) (Sx \wedge Px) (\exists x) (Sx \wedge Px) (\exists x) (Sx \wedge Px) All M is not P. All S is not M. ∴ Some S is not P. (\forall x) (Mx > ^{x}Px) (\exists x) (Sx \wedge Px) (\exists $	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is not M. All S is not M. ∴ Some S is not P. $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ All P is not M. All S is not M. ∴ Some S is not P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (\exists $	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ $(\exists x) (\exists x) $	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^m X)$ $(∀x) (Mx > ^m Sx)$ $∴ (∃x) (Sx ∧ Px)$ All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^m X)$ $(∀x) (Mx > ^m Sx)$ $(∀x) (Mx$
All M is not P. All S is not M.	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M. $(\forall x) (Px > ``Mx)$ $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ All P is not M. All S is not M. ∴ Some S is not P. $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M.	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Sx)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Sx)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Px)$ $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Sx)$	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^m X)$ $(∀x) (Mx > ^m Sx)$
All M is not P. All S is not M.	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M. $(\forall x) (Px > ``Mx)$ $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ All P is not M. All S is not M. ∴ Some S is not P. $(\forall x) (Px > ``Mx)$ $(\exists x) (Px > ``Mx)$ $(\forall x) (Px > ``Mx)$ $(\forall x) (Px > ``Mx)$ $(\exists $	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ Px)  All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ $(∀x) (Mx > ``Sx)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ ``Px) $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ ``Px) $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ ``Px)	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(∀x) (Mx > ``Sx)$ $∴ (∃x) (Sx ∧ Px)$ All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(∀x) (Mx > ``Sx)$ $(∀x) (Mx > ``Sx)$ $(∀x) (Mx > ``Sx)$ $(∃x) (Sx ∧ Px)$ All P is not M. All M is not S. ∴ Some S is not P. $(∀x) (Px > ``Mx)$ $(∀x) (Mx > ``Sx)$ $(∃x) (Sx ∧ ``Px)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) $
All M is not P. All S is not M.	All P is not M. All S is not M. ∴ Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (\exists x) (Sx \land Px)$ All P is not M. $(\forall x) (Px > ``Mx)$ $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ All P is not M. All S is not M. ∴ Some S is not P. $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ All P is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M. $(\exists x) (Sx \land Px)$ All D is not M.	All M is not P. All M is not S. ∴ Some S is P. $(\forall x) (Mx > ``Px)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Sx)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Sx)$ ∴ (∃x) (Sx $\land$ Px)  All M is not P. $(\forall x) (Mx > ``Px)$ ∴ Some S is not P. $(\forall x) (Mx > ``Px)$ $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Px)$ $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Sx)$ $(\forall x) (Mx > ``Sx)$	All P is not M. All M is not S. ∴ Some S is P. $(\forall x) (Px > ^m X)$ $(∀x) (Mx > ^m Sx)$

All M is not P.  Some S is M.  All S is P. $(\forall x) (Mx > ^nPx)$ $(\exists x) (Sx \land Mx)$ $(\forall x) (Sx > Px)$	Form: I-EIA	Form: II-EIA  All P is not M.  Some S is M.  All S is P. $(\forall x) (Px > ^mx)$ $(\forall x) (Sx > Px)$ Form: II-EIE  Form: II-EIE  Form: II-EIE	Form: III-EIA  All M is not P.  Some M is S.  All S is P. $(\forall x) (Mx > {}^{\prime}Px)$ $(\forall x) (Sx > Px)$ Form: III-EIE  Form: III-EIE  Form: III-EIA	Form: IV-EIA  All P is not M.  Some M is S.  All S is P. $(\forall x) (Px > ^mx)$ $(\exists x) (Mx \land Sx)$ $(\forall x) (Sx > Px)$ Form: IV-EIE
All M is not P.  Some S is M.  All S is not P. $(\forall x) (Mx > ^"Px)$ $(\exists x) (Sx \wedge Mx)$ $(\forall x) (Sx > ^"Px)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All P is not M.  Some S is M.  All S is not P. $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \wedge Mx)$ $(\exists x) (Sx \wedge Tx)$	All M is not P.  Some M is S.  All S is not P. $(\forall x) (Mx > {}^{x}Px)$ $(\exists x) (Mx \land Sx)$ $(\forall x) (Sx > {}^{x}Px)$ $(\exists x) (Xx > {}^{x}Px)$ $(\exists$	All P is not M.  Some M is S.  All S is not P. $(\forall x) (Px > `Mx)$ $(\exists x) (Mx \land Sx)$ $(\forall x) (Sx > `Px)$ $1 1 1 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0$
All M is not P.  Some S is M.  Some S is P. $(\forall x) (Mx > \text{"Px})$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$	Form: I-EII    3	Form: II-EII  All P is not M.  Some S is M.  Some S is P. $(\forall x) (Px > ``Mx)$ $(\exists x) (Sx \land Px)$ Form: II-EII $\exists \exists \exists \exists \exists \forall \forall \exists \exists$	Form: III-EII	Form: IV-EII  All P is not M.  Some M is S.  Some S is P. $(\forall x) (Px > ^mx)$ $(\exists x) (Sx \land Px)$ Form: IV-EII
		1 1 1 1 0	1 1 1 1 0	1 1 1 1 0

Form: I-EOA	Form: II-EOA	Form: III-EOA	Form: IV-EOA
3   3   A   3   A	3 3 3   A   3   A	3 3 3   A   3   A	3   3   A   3   A
$S$ $M$ $P$ $M > "P$ $S \wedge "M$ $S > P$	$S$ $M$ $P$ $P > M$ $S \wedge M$ $S > P$	$S$ $M$ $P$ $M > "P$ $M \land "S$ $S > P$	$S$ $M$ $P$ $P > M$ $M \land S$ $S > P$
All M is not P. 1 1 1 1 0* 0 1	All P is not M. 1 1 1 1 0* 0 1	All M is not P. 1 1 1 1 0* 0 1	All P is not M. 1 1 1 1 0* 0 1
Some S is not M. 2 1 1 0 1 0 0	Some S is not M. 2 1 1 0 1 0 0	Some M is not S. 2 1 1 0 1 0 0	Some M is not S. 2 1 1 0 1 0 0
∴ All S is P. 3 1 0 1 1 1 1	∴ All S is P. 3 1 0 1 1 1 1	∴ All S is P. 3 1 0 1 1 0 1	∴ All S is P. 3 1 0 1 1 0 1
4 1 0 0 1 1 0	4 1 0 0 1 1 0	4 1 0 0 1 0 0	4 1 0 0 1 0 0
$(\forall x) (Mx > ^nPx)                                    $	$(\forall x) (Px > Mx)                                 $	$(\forall x) (Mx > "Px)$ 5 0 1 1 0* 1 1	$(\forall x) (Px > Mx)                                 $
$(\exists x) (Sx \land ``Mx)                                  $	$ (\exists x) (Sx \land ^{^{\circ}M}x)                                  $	$(\exists x) (Mx \land "Sx) \qquad \boxed{6} \qquad \boxed{0} \qquad \boxed{1} \qquad \boxed{1} \qquad \boxed{1}$	$(\exists x) (Mx \land "Sx)                                   $
$\therefore (\forall x) (Sx > Px)  \boxed{7}  \boxed{0}  \boxed{0}  \boxed{1}  \boxed{1} \qquad \boxed{0} \qquad \boxed{1}$	$\therefore (\forall x) (Sx > Px)  \boxed{7}  \boxed{0}  \boxed{0}  \boxed{1} \qquad \boxed{0} \qquad \boxed{1}$	$\therefore (\forall x) (Sx > Px)  \boxed{7}  \boxed{0}  \boxed{0}  \boxed{1}  \boxed{1} \qquad \boxed{0} \qquad \boxed{1}$	$\therefore (\forall x) (Sx > Px)  7  0  0  1  1  0  1$
8 0 0 0 1 0 1	8 0 0 0 1 0 1	8 0 0 0 1 0 1	8 0 0 0 1 0 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-EOE	Form: II-EOE	Form: III-EOE	Form: IV-EOE
A F E E E E		A E E E E E E E E E E E E E E E E E E E	
S M P M>"P S^M S>"P	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	S M P P > "M M \( "S S > "P \)
All M is not P. 1 1 1 1 0* 0 0	All P is not M. 1 1 1 1 0* 0 0	All M is not P. 1 1 1 1 0* 0 0	All P is not M. 1 1 1 0* 0 0
Some S is not M. 2 1 1 0 1 0 1	Some S is not M. 2 1 1 0 1 0 1	Some M is not S. 2 1 1 0 1 0 1	Some M is not S. 2 1 1 0 1 0 1
∴ All S is not P. 3 1 0 1 1 1 0	: All S is not P. 3 1 0 1 1 1 0	∴ All S is not P. 3 1 0 1 1 0 0	∴ All S is not P. 3 1 0 1 1 0 0
4 1 0 0 1 1 1	4 1 0 0 1 1 1	4 1 0 0 1 0 1	4 1 0 0 1 0 1
$(\forall x) (Mx > Px) = 5 = 0 = 1 = 0 = 0 = 1$	$(\forall x) (Px > Mx) = 5 = 0 = 1 = 0 = 0 = 1$	$(\forall x) (Mx > Px)$ 5 0 1 1 0* 1 1	$(\forall x) (Px > Mx)$ 5 0 1 1 0* 1 1
$(\exists x)(Sx \land "Mx)$ 6 0 1 0 1 0 1	$(\exists x)(Sx \land ``Mx)$ 6 0 1 0 1 0 1	$(\exists x) (Mx \land \text{``S}x)$ 6 0 1 0 1 1 1	$(\exists x) (Mx \land "Sx)$ 6 0 1 0 1 1 1
$\therefore \overline{(\forall x)(Sx > "Px)}  7  0  0  1  1  0  1$	$\therefore \overline{(\forall x) (Sx > ^mPx)}  7  0  0  1  1  0  1$	$\therefore \overline{(\forall x)(Sx > ^mPx)}  7  0  0  1  1  0  1$	$\therefore (\forall x) (Sx > Px)                                 $
8 0 0 0 1 0 1	8 0 0 0 1 0 1	8 0 0 0 1 0 1	8 0 0 0 1 0 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-EOI	Form: II-EOI	Form: III-EOI	Form: IV-EOI
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
All M is not P. 1 1 1 1 0* 0 1*	All P is not M. 1 1 1 1 0* 0 1*	All M is not P. 1 1 1 1 0* 0 1*	All P is not M. 1 1 1 1 0* 0 1*
Some S is not M. 2 1 1 0 1 0 0	Some S is not M. 2 1 1 0 1 0 0	Some M is not S. 2 1 1 0 1 0 0	Some M is not S. 2 1 1 0 1 0 0
∴ Some S is P. 3 1 0 1 1 1 1*	∴ Some S is P. 3 1 0 1 1 1 1*	∴ Some S is P. 3 1 0 1 1 0 1*	∴ Some S is P. 3 1 0 1 1 0 1*
4 1 0 0 1 1 0	4 1 0 0 1 1 0	4 1 0 0 1 0 0	4 1 0 0 1 0 0
$(\forall x) (Mx > Px)$ 5 0 1 1 0* 0 0	$(\forall x) (Px > Mx) = 0 = 0 = 0$	$(\forall x) (Mx > Px)                                 $	$(\forall x) (Px > Mx)                                 $
$(\exists x) (Sx \land ``Mx)$ 6 0 1 0 1 0 0	$(\exists x) (Sx \land \tilde{M}x) \qquad 6 \qquad 0 \qquad 1 \qquad 0 \qquad 0$	$(\exists x) (Mx \land "Sx) \qquad 6 \qquad 0 \qquad 1 \qquad \qquad 1 \qquad \qquad 0$	$(\exists x) (Mx \land "Sx)$ 6 0 1 0 1 1 0
$\therefore (\exists x) (Sx \land Px)  7  0  0  1  1  0  0$	$\therefore (\exists x) (Sx \land Px) \qquad 7 \qquad 0 \qquad 0 \qquad 1 \qquad 1 \qquad 0 \qquad 0$	$\therefore (\exists x)(Sx \land Px)  7  0  0  1  1  0  0$	$\therefore (\exists x) (Sx \land Px)                                 $
8 0 0 0 1 0 0	8 0 0 0 1 0 0	8 0 0 0 1 0 0	8 0 0 0 1 0 0
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-EOO	Form: II-EOO	Form: III-EOO	Form: IV-EOO
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
All M is not P. 1 1 1 1 0* 0 0	All P is not M. 1 1 1 1 0* 0 0	All M is not P. 1 1 1 1 0* 0 0	All P is not M. 1 1 1 1 0* 0 0
Some S is not M. 2 1 1 0 1 0 1*	Some S is not M. 2 1 1 0 1 0 1*	Some M is not S. 2 1 1 0 1 0 1*	Some M is not S. 2 1 1 0 1 0 1*
∴ Some S is not P. 3 1 0 1 1 1 0	.: Some S is not P. 3 1 0 1 1 0	Some S is not P. 3 1 0 1 1 0 0	∴ Some S is not P. 3 1 0 1 1 0 0
4 1 0 0 1 1 1*	4 1 0 0 1 1 1*	4 1 0 0 1 0 1*	4 1 0 0 1 0 1*
$(\forall x) (Mx > ^nPx)$ 5 0 1 1 0* 0	$(\forall x) (Px > Mx)$ 5 0 1 1 0* 0	$(\forall x) (Mx > "Px)$ 5 0 1 1 0* 1 0	$(\forall x) (Px > Mx)$ 5 0 1 1 0* 1 0
$(\exists x)(Sx \land ``Mx)$ 6 0 1 0 1 0 0	$(\exists x)(Sx \land ``Mx)                                  $	$(\exists x) (Mx \land "Sx)                                   $	$(\exists x) (Mx \land "Sx)$ 6 0 1 0 1 1 0
$\therefore \overline{(\exists x)(Sx \land "Px)}  7  0  0  1  1  0  0$	$\therefore \overline{(\exists x)(Sx \land "Px)}  7  0  0  1  1  0  0$	$\therefore \overline{(\exists x)(Sx \land "Px)}  7  0  0  1  1  0  0$	$\therefore (\exists x) (Sx \land "Px)                                   $
	(===, (===,   -   -   -   -	(\(\frac{1}{2}\)/(\(\frac{1}))/(\(\frac{1}\)/(\(\frac{1}{2}\)/(\(\frac{1}{2}\)/(\(\frac{1}	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8     0     0     1     0     0       1     1     1     1     1     0	8 0 0 0 1 0 0	8     0     0     1     0     0       1     1     1     1     1     0

Form: I-IAA	Form: II-IAA	Form: III-IAA	Form: IV-IAA
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P.	Some P is M.	Some M is P.   1   1   1   1   1   1   1   All M is S.   2   1   1   0   0   1   0	Some P is M.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	∴ All S is P. 3 1 0 1 0 1 1	∴ All S is P. 3 1 0 1 0 1 1
4 1 0 0 0 0* 0	4 1 0 0 0 0* 0	4 1 0 0 0 1 0	4 1 0 0 0 1 0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
8 0 0 0 1 1	8 0 0 0 1 1	8 0 0 0 1 1	8 0 0 0 0 1 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-IAE	Form: II-IAE	Form: III-IAE	Form: IV-IAE
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P. 1 1 1 1 1 0	Some P is M. 1 1 1 1 1 0	Some M is P. 1 1 1 1 1 0	Some P is M. 1 1 1 1 1 0
All S is M. 2 1 1 0 0 1 1	All S is M. 2 1 1 0 0 1 1	All M is S. 2 1 1 0 0 1 1	All M is S. 2 1 1 0 0 1 1
$\therefore$ All S is not P. $\begin{vmatrix} 3 & 1 & 0 & 1 & 0 & 0^* & 0 \\ 4 & 1 & 0 & 0 & 0 & 0^* & 1 \end{vmatrix}$	∴ All S is not P. 3 1 0 1 0 0* 0 0* 1	∴ All S is not P. 3 1 0 1 0 1 0 4 1 0 0 0 1 1	∴ All S is not P. 3 1 0 1 0 1 0 4 1 0 0 0 1 1
$(\exists x) (Mx \land Px)$ 5 0 1 1 1 1 1	$(\exists x) (Px \land Mx)$ 5 0 1 1 1 1 1	$(\exists x) (Mx \land Px) \begin{vmatrix} 5 & 0 & 1 & 1 & 0 \\ 5 & 0 & 1 & 1 & 1 & 0 \end{vmatrix}$	$(\exists x) (Px \land Mx)                                 $
$(\forall x) (Sx > Mx)$ 6 0 1 0 0 1 1	$(\forall x) (Sx > Mx)$ 6 0 1 0 0 1 1	$(\forall x) (Mx > Sx)                                 $	$(\forall x) (Mx > Sx)                                 $
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-IAI	Form: II-IAI	Form: III-IAI (15, 19, 24)	Form: IV-IAI (15, 19, 24)
Form: I-IAI	Form: II-IAI	Form: III-IAI (15, 19, 24)	Form: IV-IAI (15, 19, 24)
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P. $A = A = A = A = A = A = A = A = A = A $	Some P is M.  All S is M. ∴ Some S is P.	Some M is P. $\frac{1}{1}$	Some P is M. All M is S. ∴ Some S is P.
Some M is P. $\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Some P is M.  All S is M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $\exists \exists \exists \exists \exists \exists \forall \forall \exists \exists \land $	Some M is P. $\frac{All \ M \ is \ S}{2}$	Some P is M.  All M is S. ∴ Some S is P.
Some M is P. $A = A = A = A = A = A = A = A = A = A $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > Sx)$ ∴ $(\exists x) (Sx \land Px)$ $($	Some P is M. All M is S. ∴ Some S is P.
Some M is P. All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$	Some P is M.  All S is M.  Some S is P. $(\exists x) (Px \land Mx) (\forall x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $\exists \exists \exists \exists \exists \exists \forall \forall \exists \exists \land $	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∀x) (Mx > Sx)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) $
Some M is P. All S is M. ∴ Some S is P. $(∃x)(Mx \land Px)$ $(∃x)(Sx \land Px)$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > Sx)$ ∴ $(\exists x) (Sx \land Px)$ $($	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px ∧ Mx) (∀x) (Mx > Sx)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) (∃x) $
Some M is P.  All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $($	Some P is M.  All S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Fx) (Fx) (Fx) (Fx) (Fx) (Fx) (Fx) ($	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $($	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∃x) (Sx \land Px)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃$
Some M is P. All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$	Some P is M.  All S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Fx \land Px)$ $(Fx \land Fx)$	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px ∧ Mx) (∀x) (Mx > Sx)$ ∴ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ P$
Some M is P.  All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $($	Some P is M.  All S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \land Px)$ $(\exists x)$	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px ∧ Mx) (∀x) (Mx > Sx)$ ∴ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ P$
Some M is P.	Some P is M.  All S is M. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ Some P is M.  All S is M. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ Some P is M.  All S is M.  All S is M. $(\exists x) (Px \land Mx)$ $(\exists $	Some M is P.  All M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ Form: III-IAO  Some M is P.  All M is S. $\exists \exists \exists \exists \exists \exists \forall \forall \exists \exists$	Some P is M.  All M is S.  Some S is P. $(\exists x) (Px \land Mx) (\forall x) (Mx > Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x) ($
Some M is P.	Some P is M.  All S is M. ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx > Px)  The standard sta	Some M is P.  All M is S. ∴ Some S is P. $(∃x) (Mx \land Px)$ $(∃x) (Sx \land Px)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (Sx \land$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∀x) (Mx > Sx)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (Sx \land$
Some M is P.	Some P is M.  All S is M. ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx > Px)  The standard sta	Some M is P.  All M is S. ∴ Some S is P. $(∃x) (Mx \land Px)$ $(∃x) (Sx \land Px)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (Sx \land$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∀x) (Mx > Sx)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (Fx \land Mx)$ $(∃x) (Fx \land$
Some M is P. All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx > Mx)$ $(\exists x) (Sx > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Mx \land Px)$	Some P is M.  All S is M. ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx > Px) $(∃x) (Sx > Mx)$ ∴ (∃x) (Sx ∧ Px) $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)  (∃x) (Sx ∧ Px) (∃x) (∃x) (Sx ∧ Px) (∃x) $	Some M is P.  All M is S. ∴ Some S is P. $(∃x) (Mx \land Px)$ $(∃x) (Sx \land Px)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x)$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∀x) (Mx > Sx)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x$
Some M is P. All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$	Some P is M.  All S is M. ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx > Px) $(∃x) (Sx > Mx)$ ∴ (∃x) (Sx ∧ Px)  Some P is M.  All S is M. ∴ (∃x) (Sx ∧ Px) $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)  (∃x) (Sx ∧ Px) (∃x) (∃x) (Sx ∧ Px) (∃x) $	Some M is P.  All M is S. ∴ Some S is P. $(∃x) (Mx \land Px)$ $(∃x) (Sx \land Px)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x)$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∀x) (Mx > Sx)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (Fx \land Mx)$ $(∃x) (Fx \land Mx)$ $(∃x) (Fx \land Mx)$ $(∀x) (Mx > Sx)$ $(∃x) (Sx \land Px)$ $(∃x) (Fx \land Mx)$ $(∀x) (Mx > Sx)$ $(∃x) (Sx \land Px)$ $(∃x) (xx) (xx) (xx)$ $(xx) (xx) (xx) (xx)$ $(xx) (xx) (xx) (xx) (xx)$ $(xx) (xx) (xx) (xx) (xx) (xx)$ $(xx) (xx) (xx) (xx) (xx) (xx) (xx) (xx)$
Some M is P. All S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx > Mx)$ $(\exists x) (Sx > Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Mx \land Px)$	Some P is M.  All S is M. ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx > Px) $(∃x) (Sx > Mx)$ ∴ (∃x) (Sx ∧ Px) $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)  (∃x) (Sx ∧ Px) (∃x) (∃x) (Sx ∧ Px) (∃x) $	Some M is P.  All M is S. ∴ Some S is P. $(∃x) (Mx \land Px)$ $(∃x) (Sx \land Px)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x)$	Some P is M.  All M is S. ∴ Some S is P. $(∃x) (Px \land Mx)$ $(∀x) (Mx > Sx)$ ∴ $(∃x) (Sx \land Px)$ $(∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x) (∃x) (∃x) (∃x) (∃x)$ $(∃x$

Fo	orm: I-IEA			Form: II-IEA			Form: III-IEA			Form: IV-IEA	A	
	3 3 3 A			3 3 3 3	A A		A E E E E	A		3 3 3	$\exists$ $\forall$ $\forall$	
	$M P M \land P S >$			lacksquare $lacksquare$			$S$ M P $M \wedge P$ M > "S	S > P		S M P P	$\wedge$ M M > "S S > P	
	1 1 1 0			1 1 1 1 1	0* 1		1 1 1 1 0*	1	Some P is M.	1 1 1 1	1 0* 1	
All S is not M. 2 1				2 1 1 0 0	0* 0		1 1 0 0 0*	0	All M is not S.		0 0* 0	
∴ All S is P. 3 1			∴ All S is P.	3 1 0 1 0	1 1		1 0 1 0 1	1	∴ All S is P.		0 1 1	_
(¬¬¬) (M¬¬¬¬ ¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬	0 0 0 1		(¬-) (¬- + M-)	4 1 0 0 0	1 0		1 0 0 0 1	0	(¬-) (¬- + W-)		0 1 0	4
$(\exists x) (Mx \land Px) \qquad 5 \qquad 0$ $(\forall x) (Sx > ^m x) \qquad 6 \qquad 0$				5         0         1         1         1           6         0         1         0         0	1 1		0         1         1         1         1           0         1         0         0         1	1 1	$(\exists x) (Px \land Mx)$ $(\forall x) (Mx > \tilde{S}x)$		1 1 1 0 1 1	-
$\begin{array}{c cccc} (\forall x)(Sx > Px) & 0 & 0 \\ (\forall x)(Sx > Px) & 7 & 0 \end{array}$				7 0 0 1 0	1 1	$\begin{array}{c c} (\forall x) (\exists x > \exists x) & \delta \\ (\forall x) (\exists x > \exists x) & 7 \end{array}$		1	$(\forall x)(\exists x > \exists x)$ $(\forall x)(\exists x > \exists x)$		0 1 1	-
(VX) (SX > FX) 7 0 8 0			( V X ) ( SX > FX )	8 0 0 0 0	1 1		0 0 1 0 1	1	(VX)(SX > FX)		0 1 1	+
	1 1 1 1		Į	1 1 1 1	1 0		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0			1 1 0	
_		-						-				
Fo	orm: I-IEE			Form: II-IEE			Form: III-IEE			Form: IV-IEE	7,	
	3 3 3 A	.   A	]	3 3 3 3	A A			$\forall$			A A A	$\neg$
	M P M A P S >	"M S > "P		S M P P A M	S > "M S > "P		S M P $M \wedge P$ M > "S	S > "P			∧ M M > "S S > "P	-
Some M is P. 1 1			Some P is M.	1 1 1 1 1	0* 0	Some M is P. 1	1 1 1 1 0*	0	Some P is M.		1 0* 0	
All S is not M. 2 1	1 0 0 0	1	All S is not M.	2 1 1 0 0	0* 1	All M is not S. 2	1 1 0 0 0*	1	All M is not S.	2 1 1 0	0 0* 1	
∴ All S is not P. 3 1	0 1 0 1	0	∴ All S is not P.	3 1 0 1 0	1 0	∴ All S is not P. 3	1 0 1 0 1	0	∴ All S is not P.	3 1 0 1	0 1 0	
	0 0 0 1	1		4 1 0 0 0	1 1	4	1 0 0 0 1	1		4 1 0 0	0 1 1	
$(\exists x)(Mx \land Px) \mid 5 \mid 0$				5 0 1 1 1	1 1		0 1 1 1 1	1	$(\exists x) (Px \land Mx)$		1 1 1	
				6 0 1 0 0	1 1		0 1 0 0 1	1	$\frac{(\forall x) (Mx > "Sx)}{}$		0 1 1	
$\therefore (\forall x) (Sx > ^{n}Px)  7  0$			$\therefore (\forall x) (Sx > ^{n}Px)$		1 1	$\therefore (\forall x) (Sx > ^nPx)  7$		1	$\therefore (\forall x) (Sx > ^{n}Px)$		0 1 1	
	0 0 0 1		Į	8 0 0 0 0	1 1	8	0 0 0 0 1	1			0 1 1	
1	1 1 1 1	0		1 1 1 1	1 0		1 1 1 1 1	0		1 1 1	1 1 0	
Fo	orm: I-IEI			Form: II-IEI			Form: III-IEI			Form: IV-IEI		
Ξ	A E E E	_	[	3 3 3 3	A 3		A E E E E	3		3 3 3	3 A 3	
<u>∃</u>   S	∃ ∃ ∃ ∀ M P M∧P S>	~M S ∧ P		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	S > "M S ∧ P		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	S ∧ P		3 3 3 S M P P	$\exists$ $\forall$ $\exists$ $\land$	
3   S   S   S   S   1   1   1   1   1   1	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     1     0*	"M S ∧ P 1*	Some P is M.	∃ ∃ ∃ ∃   ∃	S > "M S ∧ P 0* 1*		∃ ∃ ∃ ∀   S M P M∧P M>"S   1 1 1 1 0*	S ∧ P 1*	Some P is M.	3     3       3     4       5     M     P     P       1     1     1     1	∃ ∀ ∃  ∧M M>"S S∧P  1 0* 1*	
3   5   5   5   5   5   6   6   6   6   6	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     1     0       1     0     0     0	"M S∧P  * 1* 0	All S is not M.	∃     ∃     ∃       S     M     P     P ∧ M       1     1     1     1     1       2     1     1     0     0	S > "M S ∧ P 0* 1* 0* 0	All M is not S. 2	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     1     0     0 *	S ∧ P 1* 0	All M is not S.	S M P P 1 1 1 1 1 2 1 1 0	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P. All S is not M. Some S is P. $1$ $2$ $1$ $3$ $1$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     1     0       0     1     0     0       0     1     0     1	~M S ∧ P  * 1*  * 0  1*	All S is not M.	∃ ∃ ∃ ∃   ∃	S > "M S ∧ P 0* 1* 0* 0 1 1*	All M is not S.  ∴ Some S is P.  2 3	∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     1     0     0 *       1     0     1     0     1	S \( \text{P} \)  1*  0  1*		S M P P P 1 1 1 1 1 2 1 1 0 3 1 0 1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P. All S is not M. ∴ Some S is P. 3 1 4 1	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     1     0       0     1     0     0     1       0     0     0     1     1	"M S \ P	All S is not M. ∴ Some S is P.	∃	S > "M S \ P P P P P P P P P P P P P P P P P P	All M is not S. ∴ Some S is P.  4	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     1     0     0 *       1     0     1     0     1       1     0     0     0     1	S \( \text{P} \)  1*  0  1*  0	All M is not S. ∴ Some S is P.	3   3   3	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P. All S is not M. Some S is P. $(\exists x) (Mx \land Px)$ $\exists S$ $2  1$ $4  1$ $0  \exists S$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     1     0       0     1     0     0     1       0     0     0     1     1       1     1     1     1     1	"M S \ P	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$	∃	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	All M is not S. $\therefore$ Some S is P. $3$ $(\exists x) (Mx \land Px)$ $5$	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     1     0     0 *       1     0     1     0     1       1     0     0     0     1       0     1     1     1     1	S \( P \)  1*  0  1*  0  0  0	All M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$	3   3   3	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P. All S is not M. Some S is P. $(\exists x) (Mx \land Px) (\forall x) (Sx \gt ``Mx)$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1       1     1     1     1     1     1       1     0     0     0     1	"M S∧P  " 1*  0  1*  0  0  0	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > Mx)$	∃	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	All M is not S. 2 $\therefore \text{Some S is P.} \qquad \qquad$	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     1     0     0 *       1     0     1     0     1       1     0     0     0     1       0     1     1     1     1       0     1     0     0     1       0     1     0     0     1	S \( P \)  1*  0  1*  0  0  0  0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > "Sx)$	3   3   3   S   M   P   P     1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P.  All S is not M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ $(\exists x) (Sx \land Px)$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1       1     1     1     1     1     1       1     0     0     1     0     1       0     1     0     0     1     0     1       0     1     0     0     1	"M S \ P   1*	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ $∴ (\exists x) (Sx \land Px)$	∃	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	All M is not S. $\begin{array}{c} 2 \\ \text{∴ Some S is P.} \end{array}$ 4 $(\exists x) (Mx \land Px) \\ (\forall x) (Mx > ^{x}Sx) \\ \therefore (\exists x) (Sx \land Px) \end{array}$ 7	∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     0     1     0     0 *       1     0     1     0     1       1     0     0     0     1       0     1     1     1     1       0     1     0     0     1       0     0     1     0     1       0     0     1     0     1	S \( P \)  1*  0  1*  0  0  0	All M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$	3   3   3   1   1   1   1   1   1   1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1       1     1     1     1     1     1       1     0     0     1     0     1       0     1     0     0     1     0     1	"M S \ P	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ $∴ (\exists x) (Sx \land Px)$	∃	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	All M is not S. $\begin{array}{c} 2 \\ \text{∴ Some S is P.} \end{array}$ 4 $(\exists x) (Mx \land Px) \\ (\forall x) (Mx > ^{x}Sx) \\ \therefore (\exists x) (Sx \land Px) \end{array}$ 7	∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     0     1     0     0 *       1     0     1     0     1       1     0     0     0     1       1     0     1     1     1       0     1     0     0     1       0     0     1     0     1       0     0     1     0     1	S \ P	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > "Sx)$	3   3   3   1   1   1   1   1   1   1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1       1     1     1     1     1     1       1     0     0     0     1       0     1     0     0     1       0     0     0     0     1	"M S \ P	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ $∴ (\exists x) (Sx \land Px)$	∃	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	All M is not S. $\begin{array}{c} 2 \\ \text{∴ Some S is P.} \end{array}$ 4 $(\exists x) (Mx \land Px) \\ (\forall x) (Mx > ^{x}Sx) \\ \therefore (\exists x) (Sx \land Px) \end{array}$ 7	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     0     1     0     0 *       1     0     1     0     1       1     0     0     0     1       1     0     0     0     1       0     1     0     0     1       0     0     1     0     1       0     0     0     0     1	S \( P \)  1* 0  1* 0  0  0  0  0  0  0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > "Sx)$	3   3   3   1   1   1   1   1   1   1	∃     ∀     ∃       ∧ M     M > "S     S ∧ P       1     0*     1*       0     0*     0       0     1     1*       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0	
Some M is P.  All S is not M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $1 1 2 1 3 1 4 1 1 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1       1     1     1     1     1     1       1     0     0     0     1       0     1     0     0     1       0     0     0     0     1	"M S \ P	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ $∴ (\exists x) (Sx \land Px)$	∃	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	All M is not S. $\begin{array}{c} 2 \\ \text{∴ Some S is P.} \end{array}$ 4 $(\exists x) (Mx \land Px) \\ (\forall x) (Mx > ^{x}Sx) \\ \therefore (\exists x) (Sx \land Px) \end{array}$ 7	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     0     1     0     0 *       1     0     1     0     1       1     0     0     0     1       1     0     0     0     1       0     1     0     0     1       0     0     1     0     1       0     0     0     0     1	S \( P \)  1* 0  1* 0  0  0  0  0  0  0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > "Sx)$	3   3   3   1   1   1   1   1   1   1	∃     ∀     ∃       ∧ M     M > "S     S ∧ P       1     0*     1*       0     0*     0       0     1     1*       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       0     1     0       1     1     0	
Some M is P.  All S is not M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ $\therefore (\exists x) (Sx \land Px)$ $\exists 1$ $4  1$ $5  0$ $6  0$ $7  0$ $8  0$ $1$ Fo	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1       1     1     1     1     1     1       1     0     0     0     1     1       0     1     0     0     1     1       1     1     1     1     1     1	"M S \ P	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ $∴ (\exists x) (Sx \land Px)$	∃	S>"M S∧P 0* 0* 1* 0* 0 1 1* 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 V ∃	All M is not S. $\begin{array}{c} 2 \\ \text{∴ Some S is P.} \end{array}$ 4 $(\exists x) (Mx \land Px) \\ (\forall x) (Mx > ^{x}Sx) \\ \therefore (\exists x) (Sx \land Px) \end{array}$ 7	∃     ∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0 *       1     0     1     0     0 *       1     0     1     0     1       1     0     0     0     1       1     0     0     0     1       0     1     0     0     1       0     0     0     0     1       0     0     0     0     1       1     1     1     1     1	S ∧ P 1* 0 1* 0 0 0 0 0 0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > "Sx)$	3   3   3   1   1   1   1   1   2   1   1   0   0   1   1   1   1   1   1	∃     ∀     ∃       ∧ M     M > "S     S ∧ P       1     0*     1*       0     0*     0       0     1     1*       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       0     1     0       1     1     0	
Some M is P.  All S is not M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx \gt "Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $Fo$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0     1       0     0     0     1     1     1     1     1       1     1     0     0     1     1     1     1     0     1     <	"M S ∧ P	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^mx)$ ∴ $(\exists x) (Sx \land Px)$	∃	S>"M S \ P O P O P O P O P O P O P O P O P O P	All M is not S. $\therefore \text{ Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > ^{x}x)$ $\therefore (\exists x) (Sx \land Px)$ $\vdots$ 8	∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0     0       1     0     1     0     1       1     0     1     0     1       1     0     0     0     1       0     1     0     0     1       0     0     1     0     1       0     0     0     0     1       1     1     1     1     1       Form:     III-IEO       III-IEO       S     M     P     M ∧ P     M > P     M > "S	S ∧ P 1* 0 1* 0 0 0 0 0 0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > "Sx)$ $∴ (\exists x) (Sx \land Px)$		∃     ∀     ∃       ∧ M     M > "S     S ∧ P       1     0*     1*       0     0*     0       0     1     1*       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       0     1     0       1     1     0	
Some M is P.  All S is not M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx \gt "Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $Fo$ Some M is P. $\exists$ S	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0       0     1     0     1       0     0     0     1       1     1     1     1       0     0     0     1       0     0     0     1       1     1     1     1       orm:     I-IEO       M     P     M ∧ P     S >       1     1     1     0	"M S ∧ P  1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.	∃	S > "M   S ∧ P     0*	All M is not S. $\therefore \text{ Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > ^{x}x)$ $\therefore (\exists x) (Sx \land Px)$ $\vdots$ Some M is P.	∃     ∃     ∃     ∀       S     M     P     M ∧ P     M > "S       1     1     1     0     0*       1     0     1     0     1       1     0     1     0     1       1     0     0     0     1       0     1     0     0     1       0     0     1     0     1       0     0     0     0     1       1     1     1     1     1       Form:     III-IEO       III-IEO     III-IEO     III-IEO       III-IEO     III-IEO     III-IEO       III-IEO     III-IEO     III-IEO	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0	All M is not S. $\therefore \text{Some S is P.}$ $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > \text{`Sx})$ $\therefore (\exists x) (Sx \land Px)$ Some P is M.	3   3   3   1   1   1   1   1   1   1	∃     ∀     ∃       ∧ M     M > "S     S ∧ P       1     0*     1*       0     0*     0       0     1     1*       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0       0     0     0 </td <td></td>	
Some M is P.  All S is not M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx \gt "Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$	∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     0     0       0     1     0     0       0     1     0     1       1     1     1     1       1     0     0     1       0     1     0     1       0     0     0     1       1     1     1     1       nrm:     I-IEO       ∃     ∃     ∃     ∀       M     P     M ∧ P     S >       1     1     1     0       1     1     1     0       0     0     0     0	"M S ∧ P  1* 0 1* 0 0 0 0 0 0 0 0 0 0 1* 1* 1* 1* 1* 1* 1* 1* 1* 1* 1* 1* 1*	All S is not M.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M. All S is not M.		S > "M   S ∧ P     0*	All M is not S. $\therefore \text{ Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > ^{x}x)$ $\therefore (\exists x) (Sx \land Px)$ $\vdots$ Some M is P. All M is not S.	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > ``Sx)$ $∴ (\exists x) (Sx \land Px)$ Some P is M.  All M is not S.	3   3   3   1   1   1   1   1   1   1	∃         ∀         ∃           ∧ M         M > "S         S ∧ P           1         0*         0*           0         0         0           0         1         1*           0         1         0           1         1         0           0         1         0           0         1         0           0         1         0           1         1         0           0         0         1           0         0         1           0         0         1           0         0         1           0         0         1	
Some M is P.  All S is not M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx \gt "Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $All S is not M.  Some S is not P.  All S is not P.  Some S is not P.  3  4  4  1  6  0  7  0  8  0  1$	∃       ∃       ∀         M       P       M ∧ P       S >         1       1       0       0         0       1       0       0         0       1       0       1         1       1       1       1         1       1       1       1         0       0       0       1         1       1       1       1         0       0       0       1         1       1       1       1         1       1       1       0         0       0       0       0         1       1       1       0         0       0       0       0	"M S ∧ P 1	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.	∃	S > "M   S ∧ P     0*	All M is not S. $\therefore \text{ Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > ^{x}x)$ $\therefore (\exists x) (Sx \land Px)$ $\vdots$ Some M is P. All M is not S. $\therefore \text{ Some S is not P.}$ $3$	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	All M is not S. $\therefore \text{Some S is P.}$ $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > \text{`Sx})$ $\therefore (\exists x) (Sx \land Px)$ Some P is M.		∃         ∀         ∃           ∧ M         M > "S         S ∧ P           1         0*         0*           0         0         0           0         1         1*           0         1         0           1         1         0           0         1         0           0         1         0           0         1         0           1         1         0           0         0         1           0         0         1*           0         0         1*           0         1         0	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Fo  Some M is P.  All S is not M.  ∴ Some S is not P.  3 1  4 1  5 0  8 0  1	∃	"M S ∧ P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	All S is not M.  ∴ Some S is P.  (∃x) (Px ∧ Mx)  (∀x) (Sx > Mx)  ∴ (∃x) (Sx ∧ Px)   Some P is M.  All S is not M.  ∴ Some S is not P.	B   B   B   B   B   S   M   P   P \land M     1	S > "M   S ∧ P     0*	All M is not S.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Mx > \tilde{S}x)$ $∴ (\exists x) (Sx \land Px)$ $\vdots$ Some M is P. All M is not S. ∴ Some S is not P. $3$	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All M is not S. ∴ Some S is not P.	3   3   3   1   1   1   1   1   1   1	∃     ∀     ∃       ∧ M     M > "S     S ∧ P       1     0*     0*       0     0     0       0     1     1*       0     1     0       1     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     1     0       0     0     1*       0     0     1*       0     1     0       0     1     0       0     1     0       0     1     0       0     1     1*	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Fo  Some M is P.  All S is not M. ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ Some M is P. $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px$	∃	"M S ∧ P 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	All S is not M.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All S is not M. ∴ Some S is not P. $(\exists x) (Px \land Mx)$	B   B   B   B   B   S   M   P   P \land M     1	S > "M   S ∧ P   O*   O*   O*   O*   O*   O*   O*	All M is not S. $\therefore \text{ Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt ``Sx)$ $(\exists x) (Sx \land Px)$	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land Mx)$	3   3   3   1   1   1   1   1   1   1	∃         ∀         ∃           ∧ M         M > "S         S ∧ P           1         0*         0*           0         0         0           0         1         1*           0         1         0           1         1         0           0         1         0           0         1         0           0         1         0           0         1         0           0         0         1*           0         0         1*           0         1         0           0         1         0           0         1         0           0         1         0           0         1         1*           0         1         1*           1         0         1           0         1         1*           0         1         1*           0         1         1*           0         1         1*           0         1         1*	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ $\exists$ Some M is P.  All S is not M.  ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ $\exists$ Some M is P.  All S is not M.  ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ $\exists$ Some M is P.  All S is not M. $\exists$ Some S is not D. $\exists$ Some S is not D. $\exists$ Some S is not D. $\exists$ $\exists$ $\exists$ $\exists$ $\exists$ $\exists$ $\exists$ $\exists$	∃	"M S ∧ P 1	All S is not M. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M. All S is not M. ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx \gt Mx)$	B   B   B   B   B   S   M   P   P \land M     1	S > "M   S ∧ P   O*   O*   O*   O*   O*   O*   O*	All M is not S. $\therefore \text{Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt  Sx)$ $(\exists x) (Sx \land Px)$ $7$ 8  Some M is P. All M is not S. $\therefore \text{Some S is not P.}$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt  Sx)$ $6$	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1* 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$	3   3   3   1   1   1   1   1   1   1	∃         ∀         ∃           ∧ M         M > "S         S ∧ P           1         0*         0*           0         0         0           0         1         1*           0         1         0           1         1         0           0         1         0           0         1         0           0         1         0           0         1         0           0         0         1*           0         0         1*           0         1         0           0         1         0           0         1         1*           0         1         0           0         1         1*           0         1         1*           0         1         0           0         1         0           0         1         0           0         1         0           0         1         0	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P.  All S is not M.  ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land ``Px)$	∃	"M S ∧ P 1	All S is not M.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All S is not M. ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^mx)$ ∴ $(\exists x) (Sx \land ^mx)$ ∴ $(\exists x) (Sx \land ^mx)$ ∴ $(\exists x) (Sx \land ^mx)$	B   B   B   B   B   B   S   M   P   P \land M   M   P   N   M   M   M   M   M   M   M   M   M	S > "M   S ∧ P   O*   O*   O*   O*   O*   O*   O*	All M is not S. $\therefore \text{Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt  Sx)$ $(\exists x) (Sx \land Px)$ $7$ 8  Some M is P. All M is not S. $\therefore \text{Some S is not P.}$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt  Sx)$ $(\forall x) (Mx \gt  Sx)$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \gt  Sx)$	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1* 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land Mx)$		∃         ∀         ∃           ∧ M         M > "S         S ∧ P           1         0*         0*           0         0         0           0         1         1*           0         1         0           1         1         0           0         1         0           0         1         0           0         1         0           0         1         0           0         0         1*           0         0         1*           0         1         0           0         1         0           0         1         1*           0         1         0           0         1         1*           0         1         0           0         1         0           0         1         0           0         1         0           0         1         0           0         1         0           0         1         0	
Some M is P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P.  All S is not M.  ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ ∴ Some S is not P. $(\exists x) (Mx \land Px)$ $(\forall x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land ``Px)$	∃	"M S ∧ P 1	All S is not M.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^mx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All S is not M. ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\forall x) (Sx > ^mx)$ ∴ $(\exists x) (Sx \land ^mx)$ ∴ $(\exists x) (Sx \land ^mx)$ ∴ $(\exists x) (Sx \land ^mx)$	B   B   B   B   B   S   M   P   P \land M     1	S > "M   S ∧ P   O*   O*   O*   O*   O*   O*   O*	All M is not S. $\therefore \text{Some S is P.}$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt  Sx)$ $(\exists x) (Sx \land Px)$ $7$ 8  Some M is P. All M is not S. $\therefore \text{Some S is not P.}$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\forall x) (Mx \gt  Sx)$ $(\forall x) (Mx \gt  Sx)$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \gt  Sx)$	∃	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1* 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\forall x) (Mx > `Sx)$		∃         ∀         ∃           ∧ M         M > "S         S ∧ P           1         0*         0*           0         0         0           0         1         1*           0         1         0           1         1         0           0         1         0           0         1         0           0         1         0           0         1         0           0         0         1*           0         0         1*           0         1         0           0         1         0           0         1         1*           0         1         0           0         1         1*           0         1         1*           0         1         0           0         1         0           0         1         0           0         1         0           0         1         0	

	Form: I-IIA		F	Form: II-IIA			Form: III-IIA			Form: IV-IIA	
		∃ ∀	E	3 3 3 3	3 A		3 3 3 3	3 A			3 A
	S M P M A P	$S \wedge M  S > P$	S	S M P P M	$S \wedge M  S > P$		$S$ $M$ $P$ $M \wedge P$	$M \wedge S  S > P$		S M P P AM M	∧ S S > P
Some M is P.		1 1	Some P is M. 1 1	l 1 1 1	1 1		1 1 1 1 1	1 1	Some P is M.		1 1
Some S is M.		1 0		1 0 0	1 0	Some M is S.	2 1 1 0 0	1 0	Some M is S.		1 0
∴ All S is P.	3 1 0 1 0	0 1	∴ All S is P. 3 1	L 0 1 0	0 1	∴ All S is P.	3 1 0 1 0	0 1	∴ All S is P.	3 1 0 1 0	0 1
	4 1 0 0 0	0 0		1 0 0 0	0 0		4 1 0 0 0	0 0			0 0
$(\exists x) (Mx \land Px)$		0 1		1 1 1	0 1	$(\exists x) (Mx \land Px)$	5 0 1 1 1	0 1	$(\exists x) (Px \land Mx)$		0 1
$(\exists x) (Sx \land Mx)$		0 1		0 1 0 0	0 1	$(\exists x) (Mx \land Sx)$	6 0 1 0 0	0 1	$(\exists x) (Mx \land Sx)$	6 0 1 0 0	0 1
$\therefore (\forall x) (Sx > Px)$		0 1		0 1 0	0 1	$\therefore (\forall x) (Sx > Px)$	7 0 0 1 0	0 1	$\therefore \overline{(\forall x) (Sx > Px)}$		0 1
	8 0 0 0 0	0 1	8 0		0 1		8 0 0 0 0	0 1			0 1
	1 1 1 1	1 0	1	1 1 1 1	1 0		1 1 1 1	1 0		1 1 1 1	1 0
	Form: I-IIE		F	Form: II-IIE			Form: III-IIE			Form: IV-IIE	
		∃ ∀	<u> </u>	3 3 3 3	∃ ∀		3 3 3 3	∃ ∀			∃ ∀
	$S$ M P M $\wedge$ P	$S \wedge M \mid S > P$		$S M P P \wedge M$			$S$ $M$ $P$ $M \wedge P$			$f S \ M \ P \ P \wedge M \ M$	
	1 1 1 1 1	1 0	Some P is M. 1 1		1 0		1 1 1 1	1 0			1 0
Some S is M.		1 1	Some S is M. 2 1		1 1	Some M is S.	2 1 1 0 0	1 1	Some M is S.		1 1
∴ All S is not P.		0 0		0 1 0	0 0	∴ All S is not P.	3 1 0 1 0	0 0	∴ All S is not P.		0 0
(3 ) (24 ) 5 )	4 1 0 0 0	0 1		1 0 0 0	0 1	(7.) (2	4 1 0 0 0	0 1	(3.)(5)		0 1
$(\exists x) (Mx \land Px)$		0 1	<u> </u>	0 1 1 1	0 1	$(\exists x) (Mx \land Px)$	5 0 1 1 1	0 1	$(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$		0 1
$\frac{(\exists x) (Sx \land Mx)}{(\forall x) (Sx > {}^{"}Px)}$		0 1 0 1	$\begin{array}{c c} (\exists x) (Sx \land Mx) & 6 & 0 \\ (\forall x) (Sx > {}^{n}Px) & 7 & 0 \end{array}$	0 1 0 0	0 1 0 1	$\frac{(\exists x) (Mx \land Sx)}{(\forall x) (Sx > ^{r}Px)}$	6 0 1 0 0 7 0 0 1 0	0 1 0 1	$\therefore (\forall x) (\exists x) (\exists x \land \exists x)$ $\therefore (\forall x) (\exists x \land \exists x)$		0 1 1
(VX)(SX / PX)	8 0 0 0 0	0 1		0 0 0 0	0 1	(VX)(SX > PX)	8 0 0 0 0	0 1	(VX)(SX > PX)		0 1
	1 1 1 1	1 0			1 0		1 1 1 1	1 0			1 0
	1 1 1 1	1 0	-		1 0		1 1 1 1	1 0		1 1 1 1	1 0
	Form: I-III			Form: II-III			Form: III-III			Form: IV-III	
	3 3 3 3	3 3 SAM SAR	E	3 3 3   3	3 3 S A M   S A B		3 3 3 3	3 3 MAG GAD		B B B B	<u> </u>
Some M is D	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$S \wedge M$ $S \wedge P$	<u>∃</u> 	3 3 3 3 3 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8	$S \wedge M$ $S \wedge P$	Somo M is D	∃         ∃         ∃           S         M         P         M ∧ P	$M \wedge S  S \wedge P$	Somo P is M	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\wedge$ S S $\wedge$ P
Some M is P.	∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1	$S \wedge M$ $S \wedge P$ $1$ $1$ *	Some P is M. 1 1	3 3 3 3 3 5 5 M P P \( M \) 1 1 1 1	$S \wedge M$ $S \wedge P$ $1$ $1$ *	Some M is P.	∃ ∃ ∃ ∃   ∃	M ∧ S S ∧ P 1 1*	Some P is M.	∃ ∃ ∃ ∃	∧ S S ∧ P 1 1*
Some S is M.	∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0	$ \begin{array}{c cc} S \wedge M & S \wedge P \\ \hline 1 & 1^* \\ 1 & 0 \end{array} $	Some P is M. 1 1 1 Some S is M. 2 1	3 3 3 3 3 5 5 M P P ∧ M 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$ \begin{array}{c cc} S \land M & S \land P \\ \hline 1 & 1^* \\ 1 & 0 \end{array} $	Some M is S.	∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1       2     1     1     0     0	$ \begin{array}{c cc} M \land S & S \land P \\ \hline 1 & 1^* \\ \hline 1 & 0 \end{array} $	Some M is S.	∃     ∃     ∃     ∃       S     M     P     P ∧ M     M       1     1     1     1     1       2     1     1     0     0	$ \begin{array}{c cc}                                   $
	∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0	$ \begin{array}{c cccc} S \land M & S \land P \\ \hline 1 & 1^* \\ 1 & 0 \\ 0 & 1^* \end{array} $	Some P is M. 1 1 1 Some S is M. 2 1 1 3 1 3 1	B B B B B B B B B B B B B B B B B B B	$ \begin{array}{c cccc} S \land M & S \land P \\ \hline 1 & 1^* \\ 1 & 0 \\ 0 & 1^* \end{array} $		∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0	M∧S S∧P  1 1* 1 0 0 1*		∃     ∃     ∃     ∃       S     M     P     P ∧ M     M       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0	\( \begin{array}{cccccccccccccccccccccccccccccccccccc
Some S is M.	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0	$ \begin{array}{c cc} S \wedge M & S \wedge P \\ \hline 1 & 1^* \\ 1 & 0 \end{array} $	Some P is M. Some S is M. ∴ Some S is P.  3 S S 3 1 4 1 4 1	3 3 3 3 3 5 5 M P P ∧ M 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$ \begin{array}{c cc} S \land M & S \land P \\ \hline 1 & 1^* \\ 1 & 0 \end{array} $	Some M is S. ∴ Some S is P.	∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1       2     1     1     0     0	$ \begin{array}{c cc} M \land S & S \land P \\ \hline 1 & 1^* \\ \hline 1 & 0 \end{array} $	Some M is S. ∴ Some S is P.	∃ ∃ ∃ ∃   ∃	$ \begin{array}{c cc}                                   $
Some S is M. ∴ Some S is P.	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1	$\begin{array}{c cccc} S \wedge M & S \wedge P \\ \hline 1 & 1^* \\ 1 & 0 \\ 0 & 1^* \\ 0 & 0 \\ \end{array}$	Some P is M. Some S is M. ∴ Some S is P.  3 S S 3 1 4 1 4 1	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	S \ M S \ P 1 1* 1 0 0 1* 0 0	Some M is S.	∃ ∃ ∃ ∃   S M P M∧P   1 1 1 1 1 1   1   1   2   1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M ∧ S S ∧ P  1 1* 1 0 0 1* 0 0	Some M is S. ∴ Some S is P.	∃     ∃     ∃     ∃       S     M     P     P ∧ M     M       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0	\( \cdot S \) S \( \cdot P \)  1
Some S is M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0	$\begin{array}{c cccc} S \wedge M & S \wedge P \\ \hline 1 & 1^* \\ 1 & 0 \\ \hline 0 & 1^* \\ 0 & 0 \\ 0 & 0 \\ \end{array}$	Some P is M. Some S is M. Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Mx)$	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	S \ M S \ P 1 1* 1 0 0 1* 0 0 0 0	Some M is S. $\therefore \text{Some S is P.}$ $(\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃   ∃	M ∧ S S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0	Some M is S. $\therefore \text{ Some S is P.}$ $(\exists x) (Px \land Mx)$	∃ ∃ ∃ ∃   ∃	$ \begin{array}{c cccc} \land S & S \land P \\ \hline 1 & 1^* \\ 1 & 0 \\ \hline 0 & 1^* \\ \hline 0 & 0 \\ \hline 0 & 0 \\ \end{array} $
Some S is M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0	Some P is M. Some S is M. Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	S \ M S \ P 1 1* 1* 1 0 0 0 1* 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$	∃ ∃ ∃ ∃   ∃   ∃	M \( S \) S \( P \)  1	Some M is S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$	∃     ∃     ∃     ∃       S     M     P     P ∧ M     M       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0	∧ S S ∧ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0
Some S is M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           0         0           0         0           0         0	Some P is M. Some S is M. Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	S \ M S \ P 1 1* 1* 1 0 0 0 1* 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$	∃ ∃ ∃ ∃   ∃   ∃   S M P M ∧ P M ∧ P	M ∧ S S ∧ P 1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0	Some M is S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$	∃     ∃     ∃     ∃       S     M     P     P ∧ M     M       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0       8     0     0     0     0	∧ S S ∧ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0
Some S is M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0       8     0     0     0     0	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0	Some P is M.  Some S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x$	3	S \ M S \ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$	∃ ∃ ∃ ∃   ∃   ∃	M ∧ S S ∧ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$	∃     ∃     ∃     ∃       S     M     P     P ∧ M     M       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0       8     0     0     0     0	∧ S S ∧ P  1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Some S is M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0       8     0     0     0       1     1     1     1	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0	Some P is M.  Some S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x$	B B B B B B B B B B B B B B B B B B B	S \ M S \ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$	∃     ∃     ∃     ∃       S     M     P     M ∧ P       1     1     1     1       2     1     1     0     0       3     1     0     1     0       4     1     0     0     0       5     0     1     1     1       6     0     1     0     0       7     0     0     1     0       8     0     0     0     0       1     1     1     1	M ∧ S S ∧ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. $\therefore$ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$	∃ ∃ ∃ ∃   ∃	∧ S S ∧ P  1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Some S is M. $\therefore$ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$	∃       ∃       ∃         S       M       P       M ∧ P         1       1       1       1         2       1       1       0       0         3       1       0       1       0         4       1       0       0       0         5       0       1       1       1         6       0       1       0       0         7       0       0       1       0         8       0       0       0         1       1       1       1    Form: I-IIO	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           0         0           0         0           1         0	Some P is M.  Some S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $F$ $F$ $\exists$ S	B B B B B B B B B B B B B B B B B B B	S \ M S \ P 1 1* 1* 1 0 0 0 1* 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃ ∃   ∃   ∃   S M P M ∧ P M ∧ P	M ∧ S S ∧ P 1 1* 1 0 0 1* 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         0       0         1       0
Some S is M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$ Some M is P.	∃ ∃ ∃ ∃   ∃   S M P M ∧ P   M ∧ P	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           0         0           1         0	Some P is M.  Some S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $F$ Some P is M. $\exists S$ Some P is M. $\exists S$	B B B B B B B B B B B B B B B B B B B	S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ $∴ (\exists x) (Sx \land Px)$ Some M is P.	∃ ∃ ∃ ∃ ∃   ∃   ∃   S M P M \ P M	M ∧ S       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         1       0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.	∃ ∃ ∃ ∃   ∃	\( \begin{array}{cccccccccccccccccccccccccccccccccccc
Some S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some S is M.	∃ ∃ ∃ ∃   ∃       S M P M ∧ P       1	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           1         0    S ∧ M S ∧ "P  1 0  1 1*	Some P is M.  Some S is M.  Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $The state of the st$	B	S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some M is S.	∃ ∃ ∃ ∃ ∃   S M P M ∧ P   M ∧ P   1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M ∧ S S ∧ P  1 1*  1 0  0 1*  0 0  0 0  0 0  0 0  0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M. Some M is S.	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         1       0
Some S is M.  Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Px)$ Some M is P.	∃ ∃ ∃ ∃   ∃       S M P M ∧ P       1	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           1         0             S ∧ M         S ∧ "P           1         0           1         1*           0         0	Some P is M.  Some S is M.  ∴ Some S is P.  (∃x) (Px ∧ Mx) (∃x) (Sx ∧ Mx) ∴ (∃x) (Sx ∧ Px)    Some P is M.  Some S is M.  ∴ Some S is not P.  Some S is not P.	B B B B B B B B B B B B B B B B B B B	S ∧ M       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0         1       1*         0       0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ $∴ (\exists x) (Sx \land Px)$ Some M is P.	∃ ∃ ∃ ∃ ∃   ∃   ∃   S M P M \ P M \ P	M ∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M.	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         1       0
Some S is M.  ∴ Some S is P.  (∃x) (Mx ∧ Px) (∃x) (Sx ∧ Mx) ∴ (∃x) (Sx ∧ Px)   Some M is P.  Some S is M. ∴ Some S is not P.	∃ ∃ ∃ ∃   ∃       S M P M ∧ P       1	S ∧ M         S ∧ P           1         1*           1         0           0         1*           0         0           0         0           0         0           0         0           1         0           S ∧ M         S ∧ "P           1         0           1         1*           0         0           0         1*           0         0           1*         0           0         1*	Some P is M. Some S is M. Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ $The state of the stat$	B B B B B B B B B B B B B B B B B B B	S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0  S ∧ M S ∧ ~ P 1 0 1 1* 0 0 1 1*	Some M is S. ∴ Some S is P.  (∃x) (Mx ∧ Px) (∃x) (Mx ∧ Sx) ∴ (∃x) (Sx ∧ Px)  Some M is P. Some M is S. ∴ Some S is not P.	∃ ∃ ∃ ∃ ∃   S M P M ∧ P   M ∧ P   1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M ∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       1*         0       0         1*       0         0       1*	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M. Some M is S. ∴ Some S is not P.	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0         1*       0         0       0         1*       0         0       0
Some S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some S is M. ∴ Some S is not P. $(\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃   ∃       S M P M ∧ P       1	S ∧ M         S ∧ P           1         1*           0         1*           0         0           0         0           0         0           0         0           0         0           1         0           S ∧ M         S ∧ "P           1         0           1         1*           0         0           0         1*           0         0           0         0	Some P is M. Some S is M. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists$		S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0  S ∧ M S ∧ ~ P 1 0 1 1* 0 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some M is S. ∴ Some S is not P. $(\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃ ∃   S M P M ∧ P   M ∧ P	M ∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0         1*       0         0       0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M. Some M is S. ∴ Some S is not P. $(\exists x) (Px \land Mx)$	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       1*         0       0         0       0         0       0         0       0         0       0         1       0         1       1*         0       0         1*       0         0       0         0       0
Some S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some S is M. ∴ Some S is not P. $(\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃   ∃       S M P M ∧ P       1	S ∧ M         S ∧ P           1         1*           0         0           0         0           0         0           0         0           0         0           0         0           1         0           S ∧ M         S ∧ "P           1         0           1         1*           0         0           0         1*           0         0           0         0           0         0           0         0	Some P is M. Some S is M. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists$		S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0  S ∧ M S ∧ "P 1 0 1 1* 0 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ $Some M is P. Some M is S. ∴ Some S is not P.  (\exists x) (Mx \land Px) (\exists x) (Mx \land Px) (\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃ ∃   S M P M ∧ P   M ∧ P	M ∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       1*         0       0         1*       0         0       0         0       0         0       0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ $∴ (\exists x) (Sx \land Px)$ $Some P is M.$ $Some M is S.$ ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       0*         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0         0       0         0       0         0       0
Some S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some S is M. ∴ Some S is not P. $(\exists x) (Mx \land Px)$		S ∧ M         S ∧ P           1         1*           0         0           0         0           0         0           0         0           0         0           0         0           1         0           S ∧ M         S ∧ "P           1         0           1         1*           0         0           0         1*           0         0           0         0           0         0           0         0           0         0           0         0	Some P is M.  Some S is M. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Px \land Mx)$ $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Mx)$		S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0  S ∧ M S ∧ "P 1 0 1 1* 0 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some M is S. ∴ Some S is not P. $(\exists x) (Mx \land Px)$	∃	M ∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       1*         0       0         1*       0         0       0         0       0         0       0         0       0         0       0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is M. Some M is S. ∴ Some S is not P. $(\exists x) (Px \land Mx)$	∃ ∃ ∃ ∃   ∃	∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0         0       0         0       0         0       0         0       0         0       0         0       0
Some S is M. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Sx \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is P. Some S is M. ∴ Some S is not P. $(\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃   ∃       S M P M ∧ P       1	S ∧ M         S ∧ P           1         1*           0         0           0         0           0         0           0         0           0         0           0         0           1         0           S ∧ M         S ∧ "P           1         0           1         1*           0         0           0         1*           0         0           0         0           0         0           0         0	Some P is M.  Some S is M. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Mx)$		S ∧ M S ∧ P  1 1* 1 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0  S ∧ M S ∧ "P 1 0 1 1* 0 0 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some M is S. ∴ Some S is P. $(\exists x) (Mx \land Px)$ $(\exists x) (Mx \land Sx)$ ∴ $(\exists x) (Sx \land Px)$ $Some M is P. Some M is S. ∴ Some S is not P.  (\exists x) (Mx \land Px) (\exists x) (Mx \land Px) (\exists x) (Mx \land Px)$	∃ ∃ ∃ ∃ ∃   S M P M ∧ P   M ∧ P	M ∧ S       S ∧ P         1       1*         1       0         0       0         0       0         0       0         0       0         0       0         0       0         1       0         1       1*         0       0         1*       0         0       0         0       0         0       0	Some M is S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$ $∴ (\exists x) (Sx \land Px)$ $Some P is M.$ $Some M is S.$ ∴ Some S is not P. $(\exists x) (Px \land Mx)$ $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land Sx)$		∧ S       S ∧ P         1       1*         1       0         0       0*         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       1*         0       0         0       0         0       0         0       0

Form: I-IOA	Form: II-IOA	Form: III-IOA	Form: IV-IOA
A B B B B A	∀         E         E         E         E		A B B B B A
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P. 1 1 1 1 0 1	Some P is M. 1 1 1 1 0 1	Some M is P. 1 1 1 1 1 0 1	Some P is M. 1 1 1 1 0 1
Some S is not M. 2 1 1 0 0 0 0	Some S is not M. 2 1 1 0 0 0 0	Some M is not S. 2 1 1 0 0 0 0	Some M is not S. 2 1 1 0 0 0 0
∴ All S is P. 3 1 0 1 0 1 1 4 1 0 0 0 1 0	$\therefore$ All S is P. $egin{array}{c ccccccccccccccccccccccccccccccccccc$	$\therefore$ All S is P. $\begin{vmatrix} 3 & 1 & 0 & 1 & 0 & 0 & 1 \\ 4 & 1 & 0 & 0 & 0 & 0 & 0 \end{vmatrix}$	$\therefore$ All S is P. $\begin{vmatrix} 3 & 1 & 0 & 1 & 0 & 0 & 1 \\ 4 & 1 & 0 & 0 & 0 & 0 & 0 \end{vmatrix}$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$(\exists x) (Mx \land Px)$ 5 0 1 1 1 1 1	$(\exists x) (Px \land Mx) \begin{vmatrix} 4 & 1 & 0 & 0 & 0 & 0 & 0 \\ 5 & 0 & 1 & 1 & 1 & 1 & 1 \end{vmatrix}$
$(\exists x) (Sx \land \tilde{m}x) = 0  1  1  0  1  1  0  1  0  0 $	$(\exists x)(fx \land fx) = 0  1  1  0  1  1  (\exists x)(Sx \land fx) = 0  0  0  1  1  0  0  0  1  0  0$	$(\exists x) (\exists x$	$(\exists x)(\forall x \land \forall x)$ $\begin{vmatrix} 3 & 0 & 1 & 1 & 1 & 1 & 1 \\ (\exists x)(\forall x \land \forall x) & 6 & 0 & 1 & 0 & 0 & 1 & 1 \end{vmatrix}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
8 0 0 0 0 1	8 0 0 0 0 1	8 0 0 0 0 1	8 0 0 0 0 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-IOE	Form: II-IOE	Form: III-IOE	Form: IV-IOE
$\forall$	$\forall$		A B B B B A
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P. 1 1 1 1 0 0	Some P is M. 1 1 1 1 0 0	Some M is P. 1 1 1 1 1 0 0	Some P is M. 1 1 1 1 0 0
Some S is not M.     2     1     1     0     0     0     1       ∴ All S is not P.     3     1     0     1     0     1	Some S is not M.     2     1     1     0     0     1       ∴ All S is not P.     3     1     0     1     0	Some M is not S. 2 1 1 0 0 0 1 1 ∴ All S is not P. 3 1 0 1 0 0 0	Some M is not S. 2 1 1 0 0 0 1 1 ∴ All S is not P. 3 1 0 1 0 0 0
$\therefore$ All S is not P. 3 1 0 1 0 1 0 1 0 1 1	$\therefore$ All S is not P. $egin{array}{ c c c c c c c c c c c c c c c c c c c$	∴ All S is not P. 3 1 0 1 0 0 0 0 1 1 1 0 0 1 1 1 1 1 1 1	$\therefore$ All S is not P. $\begin{vmatrix} 3 & 1 & 0 & 1 & 0 & 0 & 0 \\ 4 & 1 & 0 & 0 & 0 & 0 & 1 \end{vmatrix}$
$(\exists x) (Mx \land Px) $	$(\exists x) (Px \land Mx)$ $\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$(\exists x) (Mx \land Px)$ 5 0 1 1 1 1 1	$(\exists x) (Px \land Mx)$ 5 0 1 1 1 1 1
$(\exists x) (\exists x$	$(\exists x)(Sx \land ``Mx) = 0  0  1  0  0  0  1$	$(\exists x) (Mx \land ``Sx)                                  $	$(\exists x) (Mx \land ``Sx) = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = $
$\therefore (\forall x) (Sx > Px)                                 $	$\therefore \overline{(\forall x)(Sx > ^nPx)}  7  0  0  1  0  0  1$	$\therefore \overline{(\forall x)(Sx > \text{"Px})}  7  0  0  1  0  0  1$	$(\forall x) (Sx > Px)                                 $
8 0 0 0 0 0 1	8 0 0 0 0 1	8 0 0 0 0 1	8 0 0 0 0 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Farmer I IOI	Form, II IOI	Form, III IOI	Form, IV IOI
Form: I-IOI	Form: II-IOI	Form: III-IOI	Form: IV-IOI
3 3 3 3 3 3		3 3 3 3 3	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P. Some S is not M. ∴ Some S is P. $3  3  3  3  3  3  3  3  3  3 $		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is P. Some S is not M. ∴ Some S is P.	Some P is M. Some S is not M. Some S is P.	Some M is P. Some S is P. $ \begin{vmatrix} 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 &$	Some P is M. Some S is P.
Some M is P. Some S is not M. $2 \ 1 \ 1 \ 0 \ 0 \ 0 \ 0$ $3 \ 1 \ 0 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0 \ 0$ $3 \ 1 \ 0 \ 1 \ 0 \ 0$ $3 \ 1 \ 0 \ 1 \ 0 \ 0$ $4 \ 1 \ 0 \ 0 \ 0 \ 0$ $5 \ 0 \ 1 \ 1 \ 1 \ 0 \ 0$	Some P is M. Some S is not M. Some S is P. $(∃x)(Px ∧ Mx)$	Some M is P. Some S is P.	Some P is M.  Some M is not S. ∴ Some S is P. $ \begin{vmatrix} 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 &$
Some M is P. Some S is not M. Some S is P.	Some P is M.  Some S is not M.  ∴ Some S is P. $(\exists x) (px \land mx)$ $(\exists x) (sx \land ^m mx)$ $\exists \exists \exists$	Some M is P. Some S is P.	Some P is M.  Some M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land ``Sx)$ Some P is M. $(\exists x) (Mx \land ``Sx)$ $(\exists x) (Mx \land (``Sx))$
Some M is P. Some S is not M. Some S is P.	Some P is M.  Some S is not M.  ∴ Some S is P. $(\exists x) (Sx \land ^m Mx)$ ∴ $(\exists x) (Sx \land ^m Mx$	Some M is P. Some S is P.	Some P is M.  Some M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ ∴ $(\exists x) (Sx \land Px)$
Some M is P. Some S is not M. ∴ Some S is P.	Some P is M. Some S is not M. ∴ Some S is P. $(∃x) (Px ∧ Mx) (∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$	Some M is P. Some S is P.	Some P is M.  Some M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land $
Some M is P. Some S is not M. Some S is P.	Some P is M.  Some S is not M.  ∴ Some S is P. $(\exists x) (Sx \land ^m Mx)$ ∴ $(\exists x) (Sx \land ^m Mx$	Some M is P. Some S is P.	Some P is M.  Some M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ ∴ $(\exists x) (Sx \land Px)$
Some M is P. Some S is not M. ∴ Some S is P.	Some P is M. Some S is not M. ∴ Some S is P. $(∃x) (Px ∧ Mx) (∃x) (Sx ∧ Px)$ $(∃x) (Sx ∧ Px)$	Some M is P. Some S is P.	Some P is M.  Some M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land $
Some M is P. Some S is not M. $2 \ 1 \ 1 \ 1 \ 1 \ 0 \ 0 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $3 \ 1 \ 0 \ 1 \ 0$ $4 \ 1 \ 0 \ 0 \ 0 \ 1 \ 0$ $6 \ 0 \ 1 \ 1 \ 1 \ 0$ $6 \ 0 \ 1 \ 0 \ 0$ $7 \ 0 \ 0 \ 1 \ 0$ $8 \ 0 \ 0 \ 0 \ 0$ $9 \ 0 \ 0$ $1 \ 1 \ 1 \ 1$ $1 \ 0 \ 0$	Some P is M. Some S is not M. ∴ Some S is P. $(∃x) (Px ∧ Mx)$ $∴ (∃x) (Sx ∧ Px)$ $(∃x) 1 1 1 1 1 1 0 0 1*$ $2 1 1 0 0 0 0 0 0 0$ $3 1 0 1 0 1 1*$ $4 1 0 0 0 0 1 1 0$ $5 0 1 1 1 1 0 0 0$ $6 0 1 0 0 0 0$ $7 0 0 1 0 0 0$ $8 0 0 0 0 0 0$ $1 1 1 1 1 1 0$	Some M is P. Some S is P.	Some P is M.  Some M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Tx \land Px$
Some M is P. Some S is not M. ∴ Some S is P. $(\exists x) (\exists x \land x \land x \land x)$ Some S is P. $(\exists x) (\exists x \land x \land x \land x)$ Some S is P. $(\exists x) (\exists x \land x \land x \land x)$ Some S is P. $(\exists x) (\exists x \land x \land x \land x)$ Some S is P. $(\exists x) (\exists x \land x \land x \land x \land x)$ Some S is P. $(\exists x) (\exists x \land x \land x \land x \land x)$ Some S is P. $(\exists x) (\exists x \land x $	Some P is M.  Some S is not M.  ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx ∧ Px)  Form: II-IOO	Some M is P. Some M is not S. ∴ Some S is P.	Some P is M.  Some M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ Form: IV-IOO
Some M is P. Some S is not M. ∴ Some S is P. $ (\exists x) (\exists x)$	Some P is M. Some S is not M. Some S is P.	Some M is P.  Some M is not S.  ∴ Some S is P.  (∃x) (Mx ∧ Px) ∴ (∃x) (Sx ∧ Px)   Form: III-IOO  Some M is P.  (∃x) (Mx ∧ Tx)	Some P is M.  Some M is not S.  ∴ Some S is P. $(\exists x) (Px \land Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ Form: IV-IOO
Some M is P. Some S is not M. ∴ Some S is P. $ (\exists x) (\exists x)$	Some P is M.  Some S is not M.  ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx ∧ Px)  Form: II-IOO  Some P is M.  Some P is M.  Some S is not M.  2 1 1 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0	Some M is P. Some M is not S. ∴ Some S is P.  (∃x) (Mx ∧ Px) ∴ (∃x) (Sx ∧ Px)  Form: III-IOO  Some M is P.  (∃x) (Mx ∧ Tx) ∴ (∃x) (Sx ∧ Px)  (∃x) (Mx ∧ Tx)	Some P is M.  Some M is not S.  ∴ Some S is P.  (∃x) (Px ∧ Mx)  ∴ (∃x) (Sx ∧ Px)  Form: IV-IOO  Some P is M.  Some P is M.  Some P is M.  Some P is M.  Some M is not S.  2 1 1 1 0 0 0 0 1*  4 1 0 0 0 0 0 0  0 0  1 1 1 1 1 1 1 0  0 0 1*  0 0 0 0  1 1 0 0  0 0 0  1 1 1 1
Some M is P. Some S is not M. ∴ Some S is P.  (∃x) (Mx ∧ Px) ∴ (∃x) (Sx ∧ Mx) ∴ (∃x) (Sx ∧ Px)  Some M is P.  Some M is P.  ∃ ∃ ∃ ∃ ∃ ∃ ∃  S M P M ∧ P S ∧ M S ∧ P  1 1 1 1 1 1 1 1 0 0 1  4 1 0 0 0 0 1 1  4 1 0 0 0 0 1  5 0 1 1 1 1 0 0  6 0 1 0 0 0 0  7 0 0 1 0 0 0  8 0 0 0 0 0 0  1 1 1 1 1 1 1  O  Form: I-IOO  Some S is not M. ∴ Some S is not P.  1 1 1 1 1 1 1 0 0 0  S M P M ∧ P S ∧ M S ∧ P  Some S is not P.  3 1 0 1 0 1 0 1 0 1  S M P M ∧ P S ∧ M S ∧ P  1 1 1 1 1 1 1 0 0 0  Some S is not P.  3 1 0 1 0 1 0 1 0	Some P is M. Some S is not M.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx ∧ Px)  Some P is M.  Some P is M.  Some S is not M.  ∴ (∃x) (Sx ∧ Mx) ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Mx)  ↑ (∃x) (Sx	Some M is P. Some M is not S. ∴ Some S is P.  (∃x) (Mx ∧ Px) ∴ (∃x) (Sx ∧ Px)  Form: III-IOO  Some M is P.  Some M is P.  (∃x) (Mx ∧ Tx) ∴ (∃x) (Sx ∧ Px)  (∃x) (Mx ∧ Tx)  (∃	Some P is M.  Some M is not S.  ∴ Some S is P.  (∃x) (Px ∧ Mx)  ∴ (∃x) (Sx ∧ Px)  Form: IV-IOO  Some P is M.  Some P is M.  Some P is M.  Some P is M.  Some B is not S.  ∴ Some S is P.  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Some M is P. Some S is not M. ∴ Some S is P. $ (\exists x) (\exists x)$	Some P is M. Some S is not M. Some S is P.	Some M is P. Some M is not S. ∴ Some S is P.  (∃x) (Mx ∧ Px) ∴ (∃x) (Sx ∧ Px)  Form: III-IOO  Some M is not S. ∴ Some M is P.  (∃x) (Mx ∧ Tx) ∴ (∃x) (Sx ∧ Px)  (∃x) (Mx ∧ Tx) ∴ (∃x) (Sx ∧ Px)  Some M is P.  Some M is P.  Some M is P.  Some M is not S. ∴ Some S is not P.  (∃x) (xx) (xx) (xx)  (xx) (x	Some P is M.  Some M is not S.  ∴ Some S is P.  (∃x) (Px ∧ Mx) ∴ (∃x) (Sx ∧ Px)  Form: IV-IOO  Some P is M.  Some P is M.  Some P is M.  Some P is M.  Some M is not S.  ∴ Some S is not P.  3
Some M is P. Some S is not M. ∴ Some S is P.	Some P is M. Some S is not M. Some S is P.	Some M is P. Some M is not S. ∴ Some S is P.  (∃x) (Mx ∧ Px) ∴ (∃x) (Sx ∧ Px)   Form: III-IOO   Some M is not S.  ∴ Some M is P.  (∃x) (Mx ∧ Px)  (∃x) (Mx ∧ Sx)  (∃x) (Mx ∧ Px)  (∃x) (Mx ∧	Some P is M.  Some M is not S.  ∴ Some S is P. $(∃x)(Px \land Mx)$ $(∃x)(Mx \land ``Sx)$ $∴ (∃x)(Sx \land Px)$ $(∃x)(Sx \land Px)$ $(∃x)(Sx$
Some M is P. Some S is not M. Some S is P. Some S is Not M. Some S is not M. Some S is not M. Some S is not P.	Some P is M. Some S is not M. Some S is P. Some N is P. Some S is P. Some P is M. Some S is not M. Some S is not P. Some S is no	Some M is P. Some S is P.      3	Some P is M. Some M is not S. ∴ Some S is P. $\exists$ 1 1 1 1 1 0 0 1* $\exists$ 3 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is P. Some S is not M. ∴ Some S is P.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Some M is P. Some S is P.      A	Some P is M. Some M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Mx \land ``Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land (Sx $
Some M is P. Some S is not M. ∴ Some S is P.	Some P is M. Some S is not M. Some S is P. Some N is P. Some S is P. Some P is M. Some S is not M. Some S is not P. Some S is no	Some M is P. Some S is P.      3	Some P is M. Some M is not S. ∴ Some S is P. $(\exists x) (Px \land Mx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land $

Form: I-OAA  Some M is not P.  All S is M.  All S is P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Sx > Px)$ To a continuous in the continuous interpretation of the continuous i	Form: II-OAA  Some P is not M.  All S is M.  All S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Sx > Px)$ Form: II-OAA	Form: III-OAA $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: IV-OAA    S   M   P   P \wedge \cdot M   M \wedge S   S \wedge P
Form: I-OAE  Some M is not P.  All S is M.  All S is not P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Sx > ``Px)$ Form: I-OAE	Form: II-OAE  Some P is not M.  All S is M.  All S is not P. $(\exists x) (Px \land ``Mx) (\forall x) (Sx \gt ``Px)$ $(\forall x) (Sx \gt ``Px)$ Form: II-OAE $3  \exists  \exists  \exists  \forall  \forall  \forall  \exists  \exists  \exists  \exists$	Form: III-OAE    S   M   P   M \land "P   M \rangle S \rangle S \rangle P	Form: IV-OAE  Some P is not M.  All M is S.  All S is not P. $(\exists x) (Px \land ``Mx) (\forall x) (Sx \gt ``Px)$ $(\forall x) (Sx \gt ``Px)$ Form: IV-OAE $3 \exists \exists \exists \exists \exists \forall \forall \forall \forall \forall \forall \exists \exists \exists \exists \exists \exists \exists \exists $
Form: I-OAI	Form: II-OAI	Form: III-OAI $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: IV-OAI $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Form: I-OAO  Some M is not P.  All S is M.  Some S is not P. $(\exists x) (Mx \land "Px) (\forall x) (Sx > Mx) (\exists x) (Sx \land "Px)$ $(\exists x) (Sx \land "Px) (\exists x) (Sx \land "Px)$ $(\exists x) (Sx \land "Px) (\exists x) (Sx \land "Px)$ $(\exists x) (Sx \land "Px) (\exists x) (Sx \land "Px) (Sx \land "Px$	Form: II-OAO	Form: III-OAO (15, 19, 24) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: IV-OAO  Some P is not M.  All M is S.  Some S is not P. $(\exists x) (Px \land ``Mx) \\ (\forall x) (Mx > Sx) \\ (\exists x) (Sx \land ``Px)$ Form: IV-OAO $\exists \exists \exists$

Form:	I-OEA		Form: II-OEA			Form: III-OEA			Form: IV-OEA		
1 3 3	A E E	A		I A I A I	Г	3 3 3 3	A A			I A	A
S M		> P	S M P P ^M			S M P M ^ "P	M > "S S > P		S M P P A	"M M > "S	S > P
Some M is not P. 1 1 1		Some P is not M.	1 1 1 1 0	0* 1	Some M is not P.	1 1 1 1 0	0* 1	Some P is not M.	1 1 1 1 0		1
All S is not M. 2 1 1	0 1 0*	O All S is not M.	2 1 1 0 0	0* 0		2 1 1 0 1	0* 0	All M is not S.	2 1 1 0 0		0
∴ All S is P. 3 1 0	1 0 1		3 1 0 1 1	1 1		3 1 0 1 0	1 1	∴ All S is P.	3 1 0 1 1	1	1
4 1 0	0 0 1	0	4 1 0 0 0	1 0		4 1 0 0 0	1 0		4 1 0 0 0	1	0
$(\exists x) (Mx \land "Px) $ 5 0 1	1 0 1	$1 \qquad (\exists x) (Px \land \text{``Mx})$	5 0 1 1 0	1 1	(∃x)(Mx ∧ "Px)	5 0 1 1 0	1 1	$(\exists x) (Px \land "Mx)$	5 0 1 1 0	1	1
$(\forall x) (Sx > Mx)                                 $	0 1 1	$1 \qquad (\forall x) (Sx > \text{`M}x)$	6 0 1 0 0	1 1	$(\forall x) (Mx > "Sx)$	6 0 1 0 1	1 1	$(\forall x) (Mx > "Sx)$	6 0 1 0 0	1	1
$(\forall x) (Sx > Px)$ 7 0 0	1 0 1	1 $(\forall x) (Sx > Px)$	7 0 0 1 1	1 1	$(\forall x) (Sx > Px)$	7 0 0 1 0	1 1	$(\forall x) (Sx > Px)$	7 0 0 1 1	1	1
8 0 0	0 0 1	1	8 0 0 0 0	1 1		8 0 0 0 0	1 1		8 0 0 0 0	1	1
1 1	1 1 1	0	1 1 1 1	1 0	_	1 1 1 1	1 0		1 1 1 1	1	0
Form:	I-OEE		Form: II-OEE			Form: III-OEE			Form: IV-OEE		
	B E E	$\forall$	3 3 3 3	A A	Γ	3 3 3 3	A A		3 3 3 3	A	A
S M	P M ^ "P S > "M S	> "P	S M P P ^M	S > "M S > "P		S M P M ^ P	M > "S S > "P		S M P P A	"M M > "S	S > "P
Some M is not P. 1 1 1	1 0 0*	O Some P is not M.	1 1 1 1 0	0* 0	Some M is not P.	1 1 1 1 0	0* 0	Some P is not M.	1 1 1 1 0	0*	0
All S is not M. 2 1 1	0 1 0*	1 All S is not M.	2 1 1 0 0	0* 1		2 1 1 0 1	0* 1	All M is not S.	2 1 1 0 0	0*	1
∴ All S is not P. 3 1 0	1 0 1	0 ∴ All S is not P.	3 1 0 1 1	1 0	∴ All S is not P.	3 1 0 1 0	1 0	∴ All S is not P.	3 1 0 1 1	1	0
4 1 0	0 0 1	1	4 1 0 0 0	1 1		4 1 0 0 0	1 1		4 1 0 0 0	1	1
$(\exists x) (Mx \land "Px) $ $\begin{bmatrix} 5 & 0 & 1 \end{bmatrix}$	1 0 1	1 $(\exists x) (Px \land \text{`M}x)$	5 0 1 1 0	1 1		5 0 1 1 0	1 1	$(\exists x) (Px \land "Mx)$	5 0 1 1 0	1	1
$(\forall x) (Sx > Mx) \qquad 6 \qquad 0 \qquad 1$		$\frac{(\forall x) (Sx > Mx)}{}$	6 0 1 0 0	1 1		6 0 1 0 1	1 1	$(\forall x) (Mx > "Sx)$	6 0 1 0 0	1	1
$\therefore (\forall x) (Sx > ^{m}Px)                                    $		$1 \qquad \therefore (\forall x) (Sx > ^{n}Px)$	7 0 0 1 1	1 1		7 0 0 1 0	1 1	$\therefore (\forall x) (Sx > ^{n}Px)$	7 0 0 1 1		1
8 0 0	0 0 1	1	8 0 0 0 0	1 1		8 0 0 0 0	1 1		8 0 0 0 0		1
1 1	1 1 1	0	1 1 1 1	1 0		1 1 1 1	1 0		1 1 1 1	1	0
Form:	I-OEI		Form: II-OEI			Form: III-OEI			Form: IV-OEI		
Form:		<b></b>	Form: II-OEI	I F I V I	Г	Form: III-OEI	T A I 3		Form: IV-OEI	A	7
	3 3 V	∃ ∧ <b>P</b>	Form: II-OEI    3   3   3   3     S   M   P   P \wedge \width{"M}	∀         ∃           S > M         S ∧ P		Form: III-OEI    ∃ ∃ ∃ ∃     S M P M ∧ *P			Form: IV-OEI    3		$\exists$ $S \wedge P$
3 3	∃ ∃ ∀ P M∧~P S>~M :	∃	3 3 3 3		Some M is not P.	3 3 3 3	M > "S S ∧ P	Some P is not M.	3 3 3 3	"M M > "S	∃ S∧P 1*
∃ ∃   S M	∃ ∃ ∀ P M∧~P S>~M :	∧ P	∃ ∃ ∃ ∃   ∃   S M P P ∧ "M	S > "M S \ P		∃ ∃ ∃ ∃   S M P M ∧ "P	M > "S S ∧ P 0* 1*	Some P is not M. All M is not S.	3 3 3 3 S M P P A	"M M > "S 0*	S ∧ P
3   3   S   M	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*	∧ P  1* Some P is not M.	∃ ∃ ∃ ∃   ∃	S > "M S \ P 0 * 1 *	All M is not S.	∃ ∃ ∃ ∃   ∃	M > "S S ∧ P 0* 1*		S M P P A	"M M > "S 0*	S ∧ P 1*
3   3   5   M	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1	A P           1*         Some P is not M.           0         All S is not M.	∃     ∃     ∃       S     M     P     P ∧ "M       1     1     1     1     0       2     1     1     0     0	S > "M S ∧ P 0* 1* 0* 0	All M is not S.	∃ ∃ ∃ ∃   ∃	M > "S S ∧ P 0* 1* 0* 0	All M is not S.	3   3   3   5   5   5   5   6   6   6   6   6   6	"M M > "S  0*  0*  1	S ∧ P 1* 0
Some M is not P.  All S is not M.  Some S is P. $ \begin{array}{c cccc}  & \exists & \exists \\ \hline S & M \\ \hline 1 & 1 & 1 \\ 2 & 1 & 1 \\ 3 & 1 & 0 \end{array} $	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1	^ P         1*       Some P is not M.         0       All S is not M.         1*       ∴ Some S is P.	∃     ∃     ∃     ∃       S     M     P     P ∧ "M       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	All M is not S. ∴ Some S is P.	∃ ∃ ∃ ∃   ∃	M > "S S ∧ P 0* 1* 0* 0 1 1*	All M is not S.	∃     ∃     ∃       S     M     P     P ∧       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1	"M M > "S 0* 0* 1	S \( \text{P} \)  1*  0  1*
Some M is not P.  All S is not M. ∴ Some S is P.  3 3 1 0 4 1 0	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1	^ P  1* Some P is not M.  0 All S is not M.  1* ∴ Some S is P.  0	∃ ∃ ∃ ∃   ∃	S>"M S∧P  0* 1*  0* 0  1 1*  1 0	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ^px)$	∃ ∃ ∃ ∃   ∃	M>~S S∧P 0* 1* 0* 0 1 1* 1 0	All M is not S. ∴ Some S is P.	∃     ∃     ∃     ∃       S     M     P     P ∧       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0	"M M > "S 0 * 0 * 1 1 1 1	S \( \text{P} \) 1* 0 1* 0
Some M is not P. $\begin{array}{ c c c c c c c c c c c c c c c c c c c$	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     1     1       0     1     1	∧ P         1*       Some P is not M.         0       All S is not M.         1*       ∴ Some S is P.         0       (∃x) (Px ∧ ~Mx)	∃     ∃     ∃     ∃       S     M     P     P ∧ "M       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0	S>"M S \ P 0* 1* 0 0* 0 1 1* 0 1 0	All M is not S. ∴ Some S is P. $(∃x) (Mx \land "Px)$ $(∀x) (Mx > "Sx)$	∃ ∃ ∃ ∃   ∃	M > "S S ∧ P  0* 1*  0* 0  1 1*  1 0  1 0	All M is not S. ∴ Some S is P. $(\exists x) (Px \land ``Mx)$	∃     ∃     ∃     ∃       S     M     P     P ∧       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0	"M M>"S  0* 0* 1 1 1 1	S ∧ P 1* 0 1* 0 0
Some M is not P. $\frac{\exists \exists}{S \ M}$ Some M is not P. $\frac{1}{All \ S \ is \ not \ M}$ . $\frac{2}{S \ S \ M}$ ∴ Some S is P. $\frac{3}{3} \ \frac{1}{3} \ 0$	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     1     1       0     1     1		∃     ∃     ∃     ∃       S     M     P     P ∧ "M       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0       6     0     1     0     0	S>"M S \ P O T T T T T T T T T T T T T T T T T T	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Mx \gt ``Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃	M > "S S ∧ P  0* 1*  0* 0  1 1*  1 0  1 0  1 0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land \text{`Mx})$ $(\forall x) (Mx > \text{`Sx})$	∃     ∃     ∃     ∃       S     M     P     P ∧       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0       6     0     1     0     0	"M M>"S  0* 0* 1  1  1  1  1	S ∧ P 1* 0 1* 0 0 0
Some M is not P. $\begin{array}{ c c c c c c c c c c c c c c c c c c c$	P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     0     1       1     0     1       0     1     1       0     0     1       0     0     1		∃     ∃     ∃     ∃       S     M     P     P ∧ "M       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0       6     0     1     0     0       7     0     0     1     1	S>"M S \ P O O O O O O O O O O O O O O O O O O	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Mx \gt ``Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land \text{`Mx})$ $(\forall x) (Mx > \text{`Sx})$	∃     ∃     ∃     ∃       S     M     P     P ∧       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0       6     0     1     0     0       7     0     0     1     1	"M M > "S  0*  0*  1  1  1  1  1	S \( P \)  1*  0  1*  0  0  0  0  0
Some M is not P.  All S is not M.  ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ ∴ $(\exists x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$	P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     0     1       1     0     1       0     1     1       1     0     1       1     0     1       1     1     1		∃     ∃     ∃     ∃       S     M     P     P ∧ "M       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0       6     0     1     0     0       7     0     0     1     1       8     0     0     0       1     1     1     1	S>"M S \ P O O O O O O O O O O O O O O O O O O	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Mx \gt ``Sx)$ $∴ (\exists x) (Sx \land Px)$	∃     ∃     ∃     ∃       S     M     P     M ∧ "P       1     1     1     1     0       2     1     1     0     1       3     1     0     1     0       4     1     0     0     0       5     0     1     1     0       6     0     1     0     1       7     0     0     1     0       8     0     0     0     0       1     1     1     1	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land \text{`Mx})$ $(\forall x) (Mx > \text{`Sx})$	∃     ∃     ∃     ∃       S     M     P     P ∧       1     1     1     1     0       2     1     1     0     0       3     1     0     1     1       4     1     0     0     0       5     0     1     1     0       6     0     1     0     0       7     0     0     1     1       8     0     0     0     0       1     1     1     1	"M M > "S  0*  0*  1  1  1  1  1	S \( P \)  1*  0  1*  0  0  0  0  0
Some M is not P.  All S is not M. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ ∴ $(\exists x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Form:	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     1     1       1     0     1       1     0     1       1     1     1       1     1     1       1     1     1       1     1     1	∧ P         1*       Some P is not M.         0       All S is not M.         Some S is P.         0       (∃x) (Px ∧ ~Mx)         0       (∀x) (Sx > ~Mx)         (∃x) (Sx ∧ Px)	∃ ∃ ∃ ∃   ∃       S M P P ∧ M     1 1 1 1 0 0     2 1 1 0 0 0     3 1 0 1 1     4 1 0 0 0 0     5 0 1 1 0 0     7 0 0 1 1 1     8 0 0 0 0 0     1 1 1 1     Form: II-OEO	S>"M S \ P O O O O O O O O O O O O O O O O O O	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Mx \gt ``Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land \text{`Mx})$ $(\forall x) (Mx > \text{`Sx})$	3   3   3   3   3   3   3   3   3   3	"M M > "S  0*  0*  1  1  1  1  1  1	S \( P \)  1*  0  1*  0  0  0  0  0  0  0  0
Some M is not P.  All S is not M. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ ∴ $(\exists x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land Px)$ Form:	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     1     1       1     0     1       1     0     1       1     1     1       1     1     1       1     1     1       1     1     1	∧ P         1*       0         0       All S is not M.         1*       ∴ Some S is P.         0       (∃x) (Px ∧ ~Mx)         0       (∀x) (Sx > ~Mx)         ∴ (∃x) (Sx ∧ Px)	∃ ∃ ∃ ∃   ∃	S> *M S ∧ P 0* 0* 0 1 1* 1 0 1 0 1 0 1 0 1 0 1 0 1 0	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ $(\forall x) (Mx \gt ``Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0	All M is not S. $\therefore$ Some S is P. $(\exists x) (Px \land \text{`Mx})$ $(\forall x) (Mx > \text{`Sx})$	∃ ∃ ∃ ∃   ∃   ∃   ∃   ∃   ∃   ∃   ∃	"M M > "S 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0
Some M is not P.  All S is not M. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ ∴ $(\exists x) (Sx > ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Form:  Form:	∃	∧ P         1*       Some P is not M.         0       All S is not M.         Some S is P.         0       (∃x) (Px ∧ ~Mx)         0       (∀x) (Sx > ~Mx)         (∃x) (Sx ∧ Px)         0         0         0         0         0         0         0         0         0         0         0	∃ ∃ ∃ ∃   ∃	S > "M   S ∧ P   O*	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land ^{\sim}Px)$ $(\forall x) (Mx > ^{\sim}Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃	M > "S       S ∧ P         0*       1*         0*       0         1       1*         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ $∴ (\exists x) (Sx \land Px)$	∃ ∃ ∃ ∃   ∃   ∃   ∃   ∃   ∃   ∃   ∃	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P.  All S is not M. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ ∴ $(\exists x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Form:  Form:  Some M is not P.  1 1 1  1 1  Form:    3 3 1 0 0     4 1 0 0     4 1 0 0     5 0 1     7 0 0 0     8 0 0 0     1 1	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       1     0     1       1     0     1       1     0     1       1     1     1       1     1     1       1     0     0       2     3     3       4     0     0*	∧ P         1*       Some P is not M.         0       All S is not M.         1*       ∴ Some S is P.         0       (∃x) (Px ∧ Mx)         0       (∀x) (Sx > Mx)         0       ∴ (∃x) (Sx ∧ Px)         0       □         0       □         0       □         0       □         0       □         0       □         0       □         0       □         0       Some P is not M.	∃ ∃ ∃ ∃   ∃	S > "M   S ∧ P   O*	All M is not S. ∴ Some S is P.  (∃x) (Mx ∧ "Px) (∀x) (Mx > "Sx) ∴ (∃x) (Sx ∧ Px)  Some M is not P.	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is not M.	3   3   3   3   3   3   3   3   3   3	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0
Some M is not P.  All S is not M. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ ∴ $(\exists x) (Sx \gt ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ Form:  Form:  Some M is not P. All S is not M.  All S is not M.  S M  S M	∃     ∃     ∀       P     M ∧ "P     S > "M       1     0     0*       0     1     0*       1     0     1       0     0     1       1     0     1       0     1     1       1     0     1       1     0     1       1     1     1       1     0     0       1     0     0       0     1     0       0     0     0*       0     0     0*	∧ P         1*       Some P is not M.         0       All S is not M.         Some S is P.         0       (∃x) (Px ∧ ~Mx)         0       (∀x) (Sx > ~Mx)         (∃x) (Sx ∧ Px)         0       (∃x) (Sx ∧ Px)         0       Some P is not M.         1*       All S is not M.	∃ ∃ ∃ ∃   ∃	S > "M   S ∧ P     0*	All M is not S. ∴ Some S is P.  (∃x) (Mx ∧ "Px) (∀x) (Mx > "Sx) ∴ (∃x) (Sx ∧ Px)  Some M is not P. All M is not S.	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       0     1*	All M is not S.  ∴ Some S is P.  (∃x) (Px ∧ ~Mx) (∀x) (Mx > ~Sx) ∴ (∃x) (Sx ∧ Px)  Some P is not M. All M is not S.	3   3   3   3   3   3   3   3   3   3	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P. $\frac{1}{All \ S \ is \ not \ M}$ . ∴ Some S is P. $\frac{4}{4} \ \frac{1}{1} \ 0$ $\frac{1}{1} \ \frac{1}{1} \ \frac{1}{$	∃	AP         1*       Some P is not M.         0       All S is not M.         1*       ∴ Some S is P.         0       (∃x) (Px ∧ ~Mx)         0       (∀x) (Sx > ~Mx)         0       ∴ (∃x) (Sx ∧ Px)         0       Some P is not M.         1*       All S is not M.         0       ∴ Some S is not P.	∃ ∃ ∃ ∃   ∃	S > "M   S ∧ P   O*	All M is not S. ∴ Some S is P.  (∃x) (Mx ∧ "Px) (∀x) (Mx > "Sx) ∴ (∃x) (Sx ∧ Px)  Some M is not P. All M is not S. ∴ Some S is not P.	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       0     1       0     0       0*     0       0*     0       0*     1*       1     0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is not M.	3   3   3   3   3   3   3   3   3   1   1	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P. $All S  ext{ is not } M$ .	∃	AP         1*       Some P is not M.         All S is not M.       ∴ Some S is P.         0       (∃x) (Px ∧ ~Mx)         0       (∀x) (Sx > ~Mx)         0       ∴ (∃x) (Sx ∧ Px)         0       Some P is not M.         1*       All S is not M.         0       ∴ Some S is not P.	∃ ∃ ∃ ∃   ∃	S > "M   S ∧ P   O*	All M is not S. ∴ Some S is P.  (∃x) (Mx ∧ "Px) (∀x) (Mx > "Sx) ∴ (∃x) (Sx ∧ Px)  Some M is not P. All M is not S. ∴ Some S is not P.	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       1     0       M > "S     S ∧ "P       0*     0       0*     1*       1     0       1     1       1     1       1     1       1     1       1     1	All M is not S.  ∴ Some S is P.  (∃x) (Px ∧ ~Mx)  (∀x) (Mx > ~Sx)  ∴ (∃x) (Sx ∧ Px)   Some P is not M.  All M is not S. ∴ Some S is not P.	3   3   3   3   3   3   3   3   3   1   1	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P. $All S  ext{ is not } M$ .		AP         1*       Some P is not M.         All S is not M.       ∴ Some S is P.         0       (∃x) (Px ∧ ™x)         0       (∀x) (Sx > ™x)         0       ∴ (∃x) (Sx ∧ Px)         0       Some P is not M.         1*       All S is not M.         0       ∴ Some S is not P.         1*       (∃x) (Px ∧ ™x)	∃ ∃ ∃ ∃   ∃	S > "M       S ∧ P         0*       1*         0*       0         1       1*         1       0         1       0         1       0         1       0         1       0         1       0         1       0         S > "M       S ∧ "P         0*       0         0*       1*         1       0         1       1         1       0	All M is not S.  ∴ Some S is P.  (∃x) (Mx ∧ "Px)  (∀x) (Mx > "Sx)  ∴ (∃x) (Sx ∧ Px)   Some M is not P.  All M is not S. ∴ Some S is not P.  (∃x) (Mx ∧ "Px)	∃ ∃ ∃ ∃   ∃	M > "S     S ∧ P       0*     1*       0*     0       1     1*       1     0       1     0       1     0       1     0       1     0       1     0       1     0       M > "S     S ∧ "P       0*     0       0*     1*       1     0       1     1       1     0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is not M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land ``Mx)$	3   3   3   3   3   3   3   3   3   3	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P.	∃	AP         1*       Some P is not M.         All S is not M.       ∴ Some S is P.         0       (∃x) (Px ^ Mx)         0       (∀x) (Sx > Mx)         0       ∴ (∃x) (Sx ∧ Px)         0       Some P is not M.         1*       All S is not M.         0       ∴ Some S is not P.         1*       (∃x) (Px ∧ Mx)         0       (∃x) (Px ∧ Mx)         0       (∃x) (Px ∧ Mx)         0       (∀x) (Sx > Mx)	∃ ∃ ∃ ∃   ∃	S > "M   S ∧ P   O*	All M is not S. ∴ Some S is P. $(\exists x) (Mx \land {}^{\sim}Px)$ $(\forall x) (Mx > {}^{\sim}Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some M is not P. All M is not S. ∴ Some S is not P. $(\exists x) (Mx \land {}^{\sim}Px)$ $(\exists x) (Mx \land {}^{\sim}Px)$ $(\forall x) (Mx > {}^{\sim}Sx)$	∃ ∃ ∃ ∃   ∃   ∃   S M P M ∧ "P   1 1 1 1 0 0 1 3 1 0 0 0 0 0 0 0 0 0 0 0	M > "S       S ∧ P         0*       1*         0*       0         1       1*         1       0         1       0         1       0         1       0         1       0         1       0         M > "S       S ∧ "P         0*       0         0*       1*         1       0         1       1         1       0         1       0         1       0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is not M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$	3   3   3   3   3   3   3   3   3   3	"M M > "S 0 * 0 * 0 * 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P. $All S  ext{ is not } M$ .			∃ ∃ ∃ ∃   ∃       S M P P ∧ "M	S > "M   S ∧ P   O*	All M is not S. $\therefore$ Some S is P. $(\exists x) (Mx \land {}^{\circ}Px)$ $(\forall x) (Mx > {}^{\circ}Sx)$ $\therefore (\exists x) (Sx \land Px)$ Some M is not P.  All M is not S. $\therefore$ Some S is not P. $(\exists x) (Mx \land {}^{\circ}Px)$ $(\forall x) (Mx > {}^{\circ}Sx)$ $\therefore (\exists x) (Sx \land {}^{\circ}Px)$	∃ ∃ ∃ ∃   ∃   ∃   S M P M ∧ "P   1 1 1 1 1 0	M > "S       S ∧ P         0*       1*         0*       0         1       1*         1       0         1       0         1       0         1       0         1       0         1       0         M > "S       S ∧ "P         0*       0         0*       1*         1       0         1       1         1       0         1       0         1       0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is not M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land ``Mx)$	3   3   3   3   3   3   3   3   1   1	"M M > "S O * O * O * O * O * O * O * O * O * O	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0
Some M is not P. $All S  ext{ is not } M$ .			∃ ∃ ∃ ∃   ∃       S M P P ∧ "M	S > "M   S ∧ P   O*	All M is not S. $\therefore$ Some S is P. $(\exists x) (Mx \land {}^{\circ}Px)$ $(\forall x) (Mx > {}^{\circ}Sx)$ $\therefore (\exists x) (Sx \land Px)$ Some M is not P.  All M is not S. $\therefore$ Some S is not P. $(\exists x) (Mx \land {}^{\circ}Px)$ $(\forall x) (Mx > {}^{\circ}Sx)$ $\therefore (\exists x) (Sx \land {}^{\circ}Px)$	∃ ∃ ∃ ∃   ∃	M > "S       S ∧ P         0*       1*         0*       0         1       1*         1       0         1       0         1       0         1       0         1       0         1       0         M > "S       S ∧ "P         0*       0         0*       1*         1       0         1       0         1       0         1       0         1       0         1       0	All M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$ ∴ $(\exists x) (Sx \land Px)$ Some P is not M.  All M is not S. ∴ Some S is not P. $(\exists x) (Px \land ``Mx)$ $(\forall x) (Mx > ``Sx)$	3   3   3   3   3   3   3   3   1   1	"M M > "S O * O * O * O * O * O * O * O * O * O	S ∧ P 1* 0 1* 0 0 0 0 0 0 0 0 0 0 0 0 0

Form: I-OIA	Form: II-OIA	Form: III-OIA	Form: IV-OIA
	W E E E E E	$\forall$	$oxed{ eta}$
S M P M ^ "P S ^ M S	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$S$ $M$ $P$ $M \land "P$ $M \land S$ $S > P$	$S$ $M$ $P$ $P \land "M$ $M \land S$ $S > P$
Some M is not P. 1 1 1 1 0 1	Some P is not M. 1 1 1 1 0 1 1	Some M is not P. 1 1 1 1 0 1 1	Some P is not M. 1 1 1 1 0 1 1
Some S is M. 2 1 1 0 1 1	Some S is M. 2 1 1 0 0 1 0	Some M is S. 2 1 1 0 1 1 0	Some M is S. 2 1 1 0 0 1 0
∴ All S is P. 3 1 0 1 0 0	. ∴ All S is P. 3 1 0 1 1 0 1	∴ All S is P. 3 1 0 1 0 0 1	∴ All S is P. 3 1 0 1 1 0 1
4 1 0 0 0 0	4 1 0 0 0 0	4 1 0 0 0 0 0	4 1 0 0 0 0 0
$(\exists x) (Mx \land "Px) $ 5 0 1 1 0 0	$(\exists x) (Px \land ``Mx)                                  $	$(\exists x) (Mx \land `Px)                                   $	$(\exists x) (Px \land ``Mx)                                  $
$(\exists x) (Sx \land Mx) \qquad 6 \qquad 0 \qquad 1 \qquad 0$	$ (\exists x) (Sx \land Mx)                                 $	$(\exists x) (Mx \land Sx) \qquad \boxed{6} \qquad \boxed{0} \qquad \boxed{1} \qquad \boxed{0} \qquad \boxed{1}$	$(\exists x) (Mx \land Sx)                                 $
$\therefore (\forall x) (Sx > Px)  7  0  0  1  0  0$	$\therefore (\forall x) (Sx > Px)  7  0  0  1  1  0  1$	$\therefore (\forall x) (Sx > Px) \qquad 7 \qquad 0 \qquad 0 \qquad 1 \qquad 0 \qquad 0 \qquad 1$	$\therefore (\forall x) (Sx > Px) \qquad 7 \qquad 0 \qquad 0 \qquad 1 \qquad 1 \qquad 0 \qquad 1$
8 0 0 0 0 0	8 0 0 0 0 1	8 0 0 0 0 0 1	8 0 0 0 0 1
1 1 1 1 1	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-OIE	Form: II-OIE	Form: III-OIE	Form: IV-OIE
	∀	A E E E E E	3 3 3 3 A
$oxed{S}$ $oxed{M}$ $oxed{P}$ $oxed{M} \wedge oxed{``P}$ $oxed{S} \wedge oxed{M}$ $oxed{S}$		$oxed{S}$ $oxed{M}$ $oxed{P}$ $oxed{M} \wedge \begin{array}{c c} M \wedge S & S > \begin{array}{c c} S > \begin{array}{c c} P & M \wedge S & S > \begin{array}{c c} P $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is not P. 1 1 1 1 0 1	Some P is not M. 1 1 1 1 0 1 0	Some M is not P. 1 1 1 1 0 1 0	Some P is not M. 1 1 1 1 0 1 0
Some S is M. 2 1 1 0 1 1	Some S is M. 2 1 1 0 0 1 1	Some M is S. 2 1 1 0 1 1 1	Some M is S. 2 1 1 0 0 1 1
∴ All S is not P. 3 1 0 1 0 0	. All S is not P. 3 1 0 1 1 0 0	∴ All S is not P. 3 1 0 1 0 0 0	∴ All S is not P. 3 1 0 1 1 0 0
4 1 0 0 0 0	4 1 0 0 0 1	4 1 0 0 0 0 1	4 1 0 0 0 1
$(\exists x) (Mx \land "Px)  5  0  1  1  0  0$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$(\exists x) (Mx \land {}^{\alpha}Px)  5  0  1  1  0  0  1$	$(\exists x) (Px \land ``Mx) $ $\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 0 0 0 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 1 1 0 1
1 1 1 1			
Form: I-OII	Form: II-OII	Form: III-OII	Form: IV-OII
3 3 3 3			
∃ ∃ ∃ ∃   ∃	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		
Some M is not P.	Some P is not M. Some S is M. Some S is P. Some S is D.	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M.	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M.	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M.  Some S is P. $(\exists x) (Px \land ``Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (Sx \land Mx)$ $(\exists x) (\Rightarrow A \land B \land$	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M.  ( $\exists x \in X \in$	Some M is not P. Some M is S. ∴ Some S is P. $(\exists x) (Mx \land ``Px)$ $(\exists x) (Mx \land Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land $	Some P is not M.  Some M is S. ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $(\exists x) (Sx \land Px)$
Some M is not P.	Some P is not M.  Some S is M.  Some S is P.  ( $\exists x) (Px \land ``Mx)$ ( $\exists x) (Px \land ``Mx)$ ( $\exists x) (Sx \land Px)$	Some M is not P.  Some M is S.  Some S is P. $(\exists x) (Mx \land "Px)$ $(\exists x) (Sx \land Px)$	Some P is not M.
Some M is not P.	Some P is not M.  Some S is M.  Some S is P.  ( $\exists x) (Px \land ``Mx)$ ( $\exists x) (Px \land ``Mx)$ ( $\exists x) (Sx \land Px)$	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M.  ( $\exists x$ ) ( $\exists x$	Some M is not P.  Some M is S.  Some S is P. $(\exists x) (Mx \land "Px)$ $(\exists x) (Sx \land Px)$	Some P is not M.  Some M is S. ∴ Some S is P.  (∃x) (Px ∧ "Mx) ∴ (∃x) (Sx ∧ Px)  ∴ (∃x) (Sx ∧ Px)  Form: IV-OIO
Some M is not P.	Some P is not M. Some S is M.  ( $\exists x$ ) ( $\exists x$	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M.  Some S is M.  ( $\exists x$ ) ( $\exists x$	Some M is not P.  Some M is S.  Some S is P. $(\exists x) (Mx \land "Px)$ $(\exists x) (Sx \land Px)$	Some P is not M.  Some M is S.  Some S is P. $(\exists x) (Px \land ``Mx)$ $(\exists x) (Sx \land Px)$
Some M is not P.	Some P is not M. Some S is M.  ( $\exists x$ ) ( $\exists x$	Some M is not P.	Some P is not M.
Some M is not P.  Some S is M.  ∴ Some S is P.  (∃x) (Mx ∧ ^Px)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Px)  Some M is not P.  Some M is not P.  Some S is M.  1 1 1 1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0	Some P is not M. Some S is M.  ( $\exists x$ ) ( $\exists x$	Some M is not P.  Some M is S. ∴ Some S is P.  (∃x) (Mx ∧ "Px) ∴ (∃x) (Sx ∧ Px)  Tome M is S. ∴ Some M is S. ∴ Some S is P.  (∃x) (Mx ∧ Sx) ∴ (∃x) (Sx ∧ Px)  (∃x) (Sx ∧ Px)   Tome M is not P.  Some M is not P.  Some M is S. ∴ Some S is not P.  1 1 1 1 1 0 1 1 1 0  1 1 1 0  1 1 1 0  1 1 0  1 1 0  0 0  1 1 0  0 0  1 1 1 1	Some P is not M. $\frac{Some\ M\ is\ S.}{.}$ ∴ Some S is P. $\exists\ \exists\ \exists$
Some M is not P.  Some S is M.  ∴ Some S is P.  (∃x) (Mx ∧ ^Px)  ∴ (∃x) (Sx ∧ Mx)  ∴ (∃x) (Sx ∧ Px)  Some M is not P.  1 1 1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0	Some P is not M. Some S is M. $(\exists x) (Px \land ^m x)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land P$	Some M is not P. $\frac{Some \ M \ is \ S.}{Some \ M \ is \ S.}$ $\therefore Some S \ is \ P.$ $(\exists x) \ (Mx \land ``Px)$ $(\exists x) \ (Mx \land Sx)$ $\therefore \ (\exists x) \ (Sx \land Px)$ $\frac{(\exists x) \ (Mx \land Sx)}{Sx \land Px}$ $\frac{(\exists x) \ (Mx \land Sx)}{Sx \land Px}$ $\frac{(\exists x) \ (Sx \land Px)}{Sx \land Px}$ $(\exists x) $	Some P is not M.
Some M is not P.	Some P is not M. Some S is M. $(\exists x) (Px \land ^m x)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land P$	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M. $(\exists x) (Px \land ^m x)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land P$	Some M is not P.	Some P is not M.
Some M is not P.	Some P is not M. Some S is M. $(\exists x) (Px \land ^m x)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land P$	Some M is not P.	Some P is not M.

Form: I-OOA	Form: II-OOA	Form: III-OOA	Form: IV-OOA
3 3 3 3 4 ∀	3 3 3 3 4 V	3 3 3 3 V	3 3 3 3 V 70 0 0 0
	Some P is not M. $\begin{bmatrix} S & M & P & P \land "M & S \land "M & S > P \\ 1 & 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$	Some M is not P. $\begin{bmatrix} S & M & P & M \land "P & M \land "S & S > P \\ 1 & 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$	Some P is not M. $\begin{bmatrix} S & M & P & P \land M & M \land S & S > P \\ 1 & 1 & 1 & 1 & 0 & 0 & 1 \end{bmatrix}$
Some S is not M. 2 1 1 0 1 0 0	Some S is not M. 2 1 1 0 0 0 0	Some M is not S. 2 1 1 0 1 0 0	Some M is not S. 2 1 1 0 0 0 0
∴ All S is P. 3 1 0 1 0 1 1	∴ All S is P. 3 1 0 1 1 1 1	∴ All S is P. 3 1 0 1 0 0 1	∴ All S is P. 3 1 0 1 1 0 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$(\exists x) (Px \land ``Mx)$ $\begin{vmatrix} 4 & 1 & 0 & 0 & 0 & 1 & 0 \\ 5 & 0 & 1 & 1 & 0 & 0 & 1 \end{vmatrix}$	$(\exists x) (Mx \land "Px) \begin{vmatrix} 4 & 1 & 0 & 0 & 0 & 0 & 0 \\ 5 & 0 & 1 & 1 & 0 & 1 & 1 \end{vmatrix}$	$(\exists x) (Px \land ``Mx)$ $\begin{vmatrix} 4 & 1 & 0 & 0 & 0 & 0 & 0 \\ 5 & 0 & 1 & 1 & 0 & 1 & 1 \end{vmatrix}$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$(\forall x) (Sx > Px)                                 $	$\therefore (\forall x) (Sx > Px) \qquad 7 \qquad 0 \qquad 0 \qquad 1 \qquad 1 \qquad 0 \qquad 1$	$\therefore (\forall x) (Sx > Px)                                 $	$\therefore (\forall x) (Sx > Px)                                 $
8 0 0 0 0 1	8 0 0 0 0 0 1	8 0 0 0 0 0 1	8 0 0 0 0 0 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
Form: I-OOE	Form: II-OOE	Form: III-OOE	Form: IV-OOE
A E E E E	A E E E E	3 3 3 3 V	A E E E E
Some M is not P. $\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Some P is not M. 1 1 1 1 0 0 0	Some M is not P. $\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Some P is not M. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Some M is not P.	Some P is not M.	Some M is not P. 1 1 1 1 0 0 0 Some M is not S. 2 1 1 0 1 0 1	Some P is not M.
∴ All S is not P. 3 1 0 1 0 1 0	∴ All S is not P. 3 1 0 1 1 1 0	∴ All S is not P. 3 1 0 1 0 0 0	∴ All S is not P. 3 1 0 1 1 0 0
4 1 0 0 0 1 1	4 1 0 0 0 1 1	4 1 0 0 0 0 1	4 1 0 0 0 0 1
$(\exists x) (Mx \land \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$(\exists x) (Mx \land \neg Px) \begin{vmatrix} 5 & 0 & 1 & 1 & 0 & 1 & 1 \\ (\exists x) (Mx \land \neg Sx) \end{vmatrix} \begin{vmatrix} 6 & 0 & 1 & 0 & 1 & 1 & 1 \end{vmatrix}$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
8 0 0 0 0 1	8 0 0 0 0 1	8 0 0 0 0 1	8 0 0 0 0 1
1 1 1 1 0	1 1 1 1 0	1 1 1 1 0	1 1 1 1 0
1 1 1 1 0			
1 1 1 1 1 0  Form: I-OOI			Form: IV-OOI
Form: I-OOI	Form: II-OOI	Form: III-OOI	Form: IV-OOI
Form: I-OOI	Form: II-OOI    3	Form: III-OOI	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Form: I-OOI $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: II-OOI    3   3   3   3   3   3   3   5   7     S M P P P \( \sigma \) M S \( \chi \) P  Some P is not M.	Form: III-OOI	
Form: I-OOI	Form: II-OOI    3	Form: III-OOI	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Form: I-OOI	Form: II-OOI    3   3   3   3   3   3   3   3     S   M   P   P ∧ "M   S ∧ "M   S ∧ P     Some P is not M.     1   1   1   1   0   0   0   1*   Some S is not M.     2   1   1   0   0   0   0     ∴ Some S is P.     3   1   0   1   1   1   1   1*   4   1   0   0   0   1   0   0   1   0	Form: III-OOI    ∃ ∃ ∃ ∃ ∃ ∃ ∃ ∃ ∃ ∃     S M P M ∧ "P M ∧ "S S ∧ P     Some M is not S.     ∴ Some S is P.	Some P is not M. Some M is not S. ∴ Some S is P. $ \begin{vmatrix} 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 \\ 5 & M & P & P \land M & M \land S & S \land P \\ 1 & 1 & 1 & 1 & 0 & 0 & 1* \\ 2 & 1 & 1 & 0 & 0 & 0 & 0 & 0 \\ 3 & 1 & 0 & 1 & 1 & 0 & 1* \\ 4 & 1 & 0 & 0 & 0 & 0 & 0 \end{vmatrix} $
Form: I-OOI $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: II-OOI  Some P is not M.  Some S is not M. $3  3  3  3  3  3  3  3$ Some S is not M. $1  1  1  1  1  0  0  1^*$ Some S is P. $3  1  0  1  1  1  1^*$ $4  1  0  0  0  1  0$ $(\exists x) (Px \land ``Mx)$ $5  0  1  1  0  0  0$	Form: III-OOI    3   3   3   3   3   3   3   3   3	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (\exists x) $
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: II-OOI  Some P is not M.  Some S is not M.  Some S is P. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: III-OOI    3   3   3   3   3   3   3   3   3	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (Px \land ``Mx)$ $(\exists x) (Px \land ``Mx)$ $(\exists x) (Mx \land ``Sx)$
Form: I-OOI $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: II-OOI  Some P is not M.  Some S is not M. $3  3  3  3  3  3  3  3$ Some S is not M. $1  1  1  1  1  0  0  1^*$ Some S is P. $3  1  0  1  1  1  1^*$ $4  1  0  0  0  1  0$ $(\exists x) (Px \land ``Mx)$ $5  0  1  1  0  0  0$	Form: III-OOI    3   3   3   3   3   3   3   3   3	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (\exists x) $
Form: I-OOI  Some M is not P. 1 1 1 1 0 0 1 1 0 0 1 1	Form: II-OOI  Some P is not M.   1 1 1 1 1 0 0 0 1*  Some S is not M.  2 1 1 0 0 0 0 1*  Some S is P.  3 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Form: III-OOI  Some M is not P. Some M is not S. Cape M is not P. Cape M is not S. Cape M	Some P is not M. Some M is not S. ∴ Some S is P. ∴ Some S is P. ∴ $(\exists x) (Px \land ``Mx)$ $(\exists x) (Mx \land ``Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (Sx \land$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: II-OOI  Some P is not M.   1 1 1 1 1 0 0 0 1*  Some S is not M.  2 1 1 0 0 0 0 1*  Some S is P.  3 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Form: III-OOI  Some M is not P. Some M is not S.	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (Px \land ^mMx)$ $(\exists x) (Px \land ^mMx)$ $(\exists x) (Px \land ^mMx)$ $(\exists x) (Sx \land Px)$ $(\exists x) $
Form: I-OOI  Some M is not P. Some S is not M. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: II-OOI  Some P is not M. Some S is not M. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Form: III-OOI  Some M is not P. Some M is not S. $\Box$ 1 1 1 1 0 0 0 1*  Some M is not S. $\Box$ 2 1 1 0 1 0 0 0 1*  Some S is P. $\Box$ 3 1 0 1 0 0 1* $\Box$ 4 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (Px \land ^mMx)$ $(\exists x) (Px \land $
Form: I-OOI  Some M is not P. Some S is not M.	Form: II-OOI  Some P is not M.  Some S is not M.   \[ \begin{array}{c ccccccccccccccccccccccccccccccccccc	Form: III-OOI  Some M is not P. Some M is not S. ∴ Some S is P. (∃x) (Mx ∧ ¬x) x (∃x) x (∃x) (Mx ∧ ¬x) x (∃x) x	Some P is not M. Some M is not S. ∴ Some S is P. ∴ Some S is P. ∴ $(\exists x) (Px \land ^mMx)$ $(\exists x) (Mx \land ^mSx)$
Form: I-OOI  Some M is not P. $3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3$	Form: II-OOI  Some P is not M.	Form: III-OOI  Some M is not P. Some M is not S. ∴ Some S is P. (∃x) (Mx ^ Px) (Mx ^ Sx) (Hx ^	Some P is not M.  Some M is not S.  ∴ Some S is P. $(\exists x) (Px \land ``Mx)$ $(\exists x) (Mx \land ``Sx)$ $(\exists x) (Sx \land Px)$ $(\exists x) (S$
Form: I-OOI  Some M is not P. Some S is not M.	Form: II-OOI  Some P is not M.  Some S is not M.   \[ \begin{array}{c ccccccccccccccccccccccccccccccccccc	Form: III-OOI    Some M is not P. Some M is not S.   1	Some P is not M. Some M is not S. ∴ Some S is P. ∴ Some S is P. ∴ $(\exists x) (Px \land ^mMx)$ $(\exists x) (Mx \land ^mSx)$
Form: I-OOI  Some M is not P. $3 1 1 0 1 0 0 1 1^*$ Some S is P. $3 1 0 1 0 0 0 1^*$ (∃x) (Sx ∧ "Mx) 6 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Form: II-OOI    Some P is not M.   Some S is not M.   Some S is not M.   Some S is P.   Some S is not M.   Some S is not M.   Some S is not M.   Some S is not P.   Som	Form: III-OOI    3	Some P is not M.  Some M is not S.  ∴ Some S is P.  (∃x) (Px ∧ "Mx)  ∴ (∃x) (Sx ∧ Px)  ∴ (∃x) (Sx ∧ Px)  ∴ (∃x) (Sx ∧ Px)  Some P is not M.  Some M is not S.  ∴ Some S is not P.  Some D is not M.  Some M is not S.  ∴ Some S is not P.  Some S is not P.  Some D is not M.  Some S is not P.  Some D is not M.  Some S is not P.
Form: I-OOI  Some M is not P.	Form: II-OOI  Some P is not M.  Some S is not M.   \[ \begin{array}{c ccccccccccccccccccccccccccccccccccc	Form: III-OOI  Some M is not P. Some S is P.	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (\exists x) (\exists x \land Px)$ Form: IV-OOO  Some P is not M. Some P is not M. ∴ Some S is not P. ∴ $(\exists x) (Px \land ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $($
Form: I-OOI  Some M is not P. Some S is P.    (∃x) (Mx ∧ "Px)   ∴ (∃x) (Sx ∧ Px)    Some M is not P.    1 1 1 1 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0	Form: II-OOI    Some P is not M.   Some S is not M.   Some S is P.   Some S is not M.   Some S is not M.   Some S is not P.   Some	Form: III-OOI  Some M is not P. Some S is P.	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (\exists x) (\exists x \land Px)$ Form: IV-OOO  Some P is not M. Some P is not M. ∴ Some S is not P. ∴ $(\exists x) (Px \land ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ $(\exists x) (S$
Form: I-OOI  Some M is not P.	Form: II-OOI  Some P is not M.  Some S is not M.   \[ \begin{array}{c ccccccccccccccccccccccccccccccccccc	Form: III-OOI  Some M is not P. Some S is P.	Some P is not M. Some M is not S. ∴ Some S is P. ∴ $(\exists x) (\exists x) (\exists x \land Px)$ Form: IV-OOO  Some P is not M. Some P is not M. ∴ Some S is not P. ∴ $(\exists x) (Px \land ``Mx)$ ∴ $(\exists x) (Sx \land Px)$ ∴ $($