

Form: I-AAA (15, 19, 24)						
	∃	∃	∃	∀	∀	∀
	S	M	P	M > P	S > M	S > P
All M is P. All S is M. ∴ All S is P.	1	1	1	1	1	1
	2	1	1	0	0	1
	3	1	0	1	1	0
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	1
(∀x) (Sx > Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: I-AAE						
	∃	∃	∃	∀	∀	∀
	S	M	P	M > P	S > M	S > ~P
All M is P. All S is M. ∴ All S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	1	0
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	1
(∀x) (Sx > Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: I-AAI (24)						
	∃	∃	∃	∀	∀	∃
	S	M	P	M > P	S > M	S ∧ P
All M is P. All S is M. ∴ Some S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	0
(∀x) (Sx > Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: I-AAO						
	∃	∃	∃	∀	∀	∃
	S	M	P	M > P	S > M	S ∧ ~P
All M is P. All S is M. ∴ Some S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > Px)	5	0	1	1	1	0
(∀x) (Sx > Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: II-AAA						
	∃	∃	∃	∀	∀	∀
	S	M	P	P > M	S > M	S > P
All P is M. All S is M. ∴ All S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	1
(∀x) (Sx > Mx)	6	0	1	0	1	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: II-AAE						
	∃	∃	∃	∀	∀	∀
	S	M	P	P > M	S > M	S > ~P
All P is M. All S is M. ∴ All S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	1
(∀x) (Sx > Mx)	6	0	1	0	1	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: II-AAI						
	∃	∃	∃	∀	∀	∃
	S	M	P	P > M	S > M	S ∧ P
All P is M. All S is M. ∴ Some S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	0
(∀x) (Sx > Mx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: II-AAO						
	∃	∃	∃	∀	∀	∃
	S	M	P	P > M	S > M	S ∧ ~P
All P is M. All S is M. ∴ Some S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	0	0
	4	1	0	0	1	1
(∀x) (Px > Mx)	5	0	1	1	1	0
(∀x) (Sx > Mx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: III-AAA						
	∃	∃	∃	∀	∀	∀
	S	M	P	M > P	M > S	S > P
All M is P. All M is S. ∴ All S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	0	1
(∀x) (Mx > Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: III-AAE						
	∃	∃	∃	∀	∀	∀
	S	M	P	M > P	M > S	S > ~P
All M is P. All M is S. ∴ All S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > Px)	5	0	1	1	0	1
(∀x) (Mx > Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: III-AAI (19, 24)						
	∃	∃	∃	∀	∀	∃
	S	M	P	M > P	M > S	S ∧ P
All M is P. All M is S. ∴ Some S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	0	0
(∀x) (Mx > Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: III-AAO						
	∃	∃	∃	∀	∀	∃
	S	M	P	M > P	M > S	S ∧ ~P
All M is P. All M is S. ∴ Some S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > Px)	5	0	1	1	0	0
(∀x) (Mx > Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: IV-AAA						
	∃	∃	∃	∀	∀	∀
	S	M	P	P > M	M > S	S > P
All P is M. All M is S. ∴ All S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	1
(∀x) (Mx > Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: IV-AAE						
	∃	∃	∃	∀	∀	∀
	S	M	P	P > M	M > S	S > ~P
All P is M. All M is S. ∴ All S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Px > Mx)	5	0	1	1	0	1
(∀x) (Mx > Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	1
	8	0	0	0	1	1

Form: IV-AAI (19, 24)						
	∃	∃	∃	∀	∀	∃
	S	M	P	P > M	M > S	S ∧ P
All P is M. All M is S. ∴ Some S is P.	1	1	1	1	1	1
	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	0
(∀x) (Mx > Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: IV-AAO						
	∃	∃	∃	∀	∀	∃
	S	M	P	P > M	M > S	S ∧ ~P
All P is M. All M is S. ∴ Some S is not P.	1	1	1	1	1	0
	2	1	1	0	1	1
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Px > Mx)	5	0	1	1	0	0
(∀x) (Mx > Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0



Form: I-AIA						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	S ∧ M	S > P
All M is P.	1	1	1	1	1	1
Some S is M.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
(∀x) (Mx > Px)	5	0	1	1	0	1
(∃x) (Sx ∧ Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-AIA

	∃	∃	∃	∀	∃	∀
	S	M	P	P > M	S ∧ M	S > P
All P is M.	1	1	1	1	1	1
Some S is M.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	1
(∃x) (Sx ∧ Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	1	1

Form: III-AIA

	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	M ∧ S	S > P
All M is P.	1	1	1	1	1	1
Some M is S.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
(∀x) (Mx > Px)	5	0	1	1	0	1
(∃x) (Mx ∧ Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-AIA							
	∃	∃	∃	∀	∃	∀	
	S	M	P	P > M	M ∧ S	S > P	
All P is M.	1	1	1	1	1	1	
<u>Some M is S.</u>	2	1	1	0	1	0	
∴ All S is P.	3	1	0	1	0	1	
	4	1	0	0	1	0	
(∀x) (Px > Mx)	5	0	1	1	0	1	
(∃x) (Mx ∧ Sx)	6	0	1	0	0	1	
∴ (∀x) (Sx > Px)	7	0	0	1	0	1	
	8	0	0	0	1	1	

Form: I-AIE						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	S ∧ M	S > ~P
All M is P.	1	1	1	1	1	0
Some S is M.	2	1	1	0	1	1
All S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
(∀x) (Mx > Px)	5	0	1	1	0	1
(∃x) (Sx ∧ Mx)	6	0	1	0	0	1
(∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-AIE							
	∃	∃	∃	∀	∃	∀	
	S	M	P	P > M	S ∧ M	S > ~P	
All P is M.	1	1	1	1	1	0	
Some S is M.	2	1	1	1	1	1	
∴ All S is not P.	3	1	0	1	0	0	
	4	1	0	0	1	1	
(∀x) (Px > Mx)	5	0	1	1	0	1	
(∃x) (Sx ∧ Mx)	6	0	1	0	1	1	
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1	
	8	0	0	0	1	1	

Form: III-AIE						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	M ∧ S	S > ~P
All M is P.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
∴ All S is not P.	3	1	0	1	0	0
	4	1	0	0	1	1
(∀x) (Mx > Px)	5	0	1	1	0	1
(∃x) (Mx ∧ Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	1	1

Form: IV-AIE

	∃	∃	∃	∀	∃	∀
	S	M	P	P > M	M ∧ S	S > ~P
All P is M.	1	1	1	1	1	0
<u>Some M is S.</u>	2	1	1	0	1	1
∴ All S is not P.	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	1
(∃x) (Mx ∧ Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	1	1

Form: I-AII (15, 19, 24)						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	S ∧ M	S ∧ P
All M is P.	1	1	1	1	1	1
<u>Some S is M.</u>	2	1	1	0	1	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	0	0
(∃x) (Sx ∧ Mx)	6	0	1	0	0	0
<u>(∃x) (Sx ∧ Px)</u>	7	0	0	1	0	0
	8	0	0	0	1	0

Form: II-AII

	∃	∃	∃	∀	∃	∃
	S	M	P	P > M	S ∧ M	S ∧ P
All P is M.	1	1	1	1	1	1
Some S is M.	2	1	1	1	1	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	0
(∃x) (Sx ∧ Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: III-AII (15, 19, 24)							
	∃	∃	∃	∀	∃	∃	
	S	M	P	M > P	M ∧ S	S ∧ P	
All M is P.	1	1	1	1	1	1	
<u>Some M is S.</u>	2	1	1	0	1	0	
∴ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
(∀x) (Mx > Px)	5	0	1	1	0	0	
(∃x) (Mx ∧ Sx)	6	0	1	0	0	0	
<u>∴ (∃x) (Sx ∧ Px)</u>	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: IV-AII

	∃	∃	∃	∀	∃	∃
	S	M	P	P > M	M ∧ S	S ∧ P
All P is M.	1	1	1	1	1	1
<u>Some M is S.</u>	2	1	0	1	1	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	1	0	0
(∀x) (Px > Mx)	5	0	1	1	0	0
(∃x) (Mx ∧ Sx)	6	0	1	0	0	0
<u>∴ (∃x) (Sx ∧ Px)</u>	7	0	0	1	0	0
	8	0	0	0	1	0

Form: I-AIO

	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	S ∧ M	S ∧ ~P
All M is P.	1	1	1	1	1	0
Some S is M.	2	1	1	0	1	1
Some S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
(∀x) (Mx > Px)	5	0	1	1	0	0
(∃x) (Sx ∧ Mx)	6	0	1	0	0	0
(∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	1	0	0

Form: II-AIO							
	∃	∃	∃	∀	∃	∃	
	S	M	P	P > M	S ∧ M	S ∧ ~P	
All P is M.	1	1	1	1	1	0	
Some S is M.	2	1	1	0	1	1	
Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	1	1	
(∀x) (Px > Mx)	5	0	1	1	0	0	
(∃x) (Sx ∧ Mx)	6	0	1	0	0	0	
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0	
	8	0	0	0	1	0	

Form: III-AIO

	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	M ∧ S	S ∧ ~P
All M is P.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
Some S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
(∀x) (Mx > Px)	5	0	1	1	0	0
(∃x) (Mx ∧ Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-AIO

	<div>∃</div>	<div>∃</div>	<div>∃</div>	<div>∀</div>	<div>∃</div>	<div>∃</div>
	<div>S</div>	<div>M</div>	<div>P</div>	<div>P &gt; M</div>	<div>M ∧ S</div>	<div>S ∧ ~P</div>
All P is M.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
∴ Some S is not P.	3	1	0	1	0	0
	4	1	0	0	1	1
(∀x) (Px > Mx)	5	0	1	1	0	0
(∃x) (Mx ∧ Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: I-AOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	S ∧ ~M	S > P
All M is P.	1	1	1	1	0	1
Some S is not M.	2	1	1	0	0	0
∴ All S is P.	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: II-AOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > M	S ∧ ~M	S > P
All P is M.	1	1	1	1	0	1
Some S is not M.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: III-AOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	M ∧ ~S	S > P
All M is P.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: IV-AOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > M	M ∧ ~S	S > P
All P is M.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	1
∴ (∀x) (Sx > Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: I-AOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	S ∧ ~M	S > ~P
All M is P.	1	1	1	1	0	0
Some S is not M.	2	1	1	0	0	1
∴ All S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > Px)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: II-AOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > M	S ∧ ~M	S > ~P
All P is M.	1	1	1	1	0	0
Some S is not M.	2	1	1	0	1	0
∴ All S is not P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: III-AOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > P	M ∧ ~S	S > ~P
All M is P.	1	1	1	1	0	0
Some M is not S.	2	1	1	0	0	1
∴ All S is not P.	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: IV-AOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > M	M ∧ ~S	S > ~P
All P is M.	1	1	1	1	0	0
Some M is not S.	2	1	1	0	1	0
∴ All S is not P.	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	1	0

Form: I-AOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	S ∧ ~M	S ∧ P
All M is P.	1	1	1	1	0	1
Some S is not M.	2	1	1	0	0	0
∴ Some S is P.	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: II-AOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > M	S ∧ ~M	S ∧ P
All P is M.	1	1	1	1	0	1
Some S is not M.	2	1	1	0	0	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: III-AOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	M ∧ ~S	S ∧ P
All M is P.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: IV-AOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > M	M ∧ ~S	S ∧ P
All P is M.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: I-AOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	S ∧ ~M	S ∧ ~P
All M is P.	1	1	1	1	0	0
Some S is not M.	2	1	1	0	0	1
∴ Some S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > Px)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: II-AOO (15, 19, 24)						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > M	S ∧ ~M	S ∧ ~P
All P is M.	1	1	1	1	0	0
Some S is not M.	2	1	1	0	0	1
∴ Some S is not P.	3	1	0	1	0	0
	4	1	0	0	1	1
(∀x) (Px > Mx)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: III-AOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > P	M ∧ ~S	S ∧ ~P
All M is P.	1	1	1	1	0	0
Some M is not S.	2	1	1	0	0	1
∴ Some S is not P.	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Mx > Px)	5	0	1	1	1	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	1	0

Form: IV-AOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > M	M ∧ ~S	S ∧ ~P
All P is M.	1	1	1	1	0	0
Some M is not S.	2	1	1	0	0	1
∴ Some S is not P.	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Px > Mx)	5	0	1	1	1	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	1	0





Form: I-EIA

	$\exists \quad \exists \quad \exists$			$\forall$	$\exists$	$\forall$
	S	M	P	$M > \sim P$	$S \wedge M$	$S > P$
All M is not P.	1	1	1	0	1	1
Some S is M.	2	1	0	1	1	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\forall x)(Mx > \sim Px)$	5	0	1	0	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-EIA

	$\exists \quad \exists \quad \exists$			$\forall$	$\exists$	$\forall$
	S	M	P	$P > \sim M$	$S \wedge M$	$S > P$
All P is not M.	1	1	1	1	1	1
Some S is M.	2	1	1	0	1	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\forall x)(Px > \sim Mx)$	5	0	1	1	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: III-EIA							
		$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\forall$
		S	M	P	$M > \sim P$	$M \wedge S$	$S > P$
All M is not P.	1	1	1	1	0	1	1
Some M is S.	2	1	1	0	1	1	0
$\therefore$ All S is P.	3	1	0	1	1	0	1
	4	1	0	0	1	0	0
$(\forall x)(Mx > \sim Px)$	5	0	1	1	0	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	1	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	1	0	1
	8	0	0	0	1	0	1

Form: IV-EIA							
		∃	∃	∃	∀	∃	∀
		S	M	P	$P > \sim M$	$M \wedge S$	$S > P$
All P is not M.	1	1	1	1	0	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
$(\forall x)(Px > \sim Mx)$	5	0	1	1	0	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	1	0	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	1	0	1
	8	0	0	0	1	0	1

Form: I-EIE

	$\exists \quad \exists \quad \exists$			$\forall$	$\exists$	$\forall$
	S	M	P	$M > ^\sim P$	$S \wedge M$	$S > ^\sim P$
All M is not P.	1	1	1	0	1	0
<u>Some S is M.</u>	2	1	0	1	1	1
$\therefore$ All S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\forall x)(Mx > ^\sim Px)$	5	0	1	0	0	1
<u><math>(\exists x)(Sx \wedge Mx)</math></u>	6	0	1	0	0	1
$\therefore (\forall x)(Sx > ^\sim Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-EIE							
		∃	∃	∃	∀	∃	∀
		S	M	P	$P > \sim M$	$S \wedge M$	$S > \sim P$
All P is not M.	1	1	1	1	0	1	0
Some S is M.	2	1	1	0	1	1	1
∴ All S is not P.	3	1	0	1	1	0	0
	4	1	0	0	1	0	1
$(\forall x)(Px > \sim Mx)$	5	0	1	1	0	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	1	0	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	1	0	1
	8	0	0	0	1	0	1

Form: III-EIE							
		$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\forall$
		S	M	P	$M > \sim P$	$M \wedge S$	$S > \sim P$
All M is not P.	1	1	1	1	0	1	0
Some M is S.	2	1	1	0	1	1	1
$\therefore$ All S is not P.	3	1	0	1	1	0	0
	4	1	0	0	1	0	1
$(\forall x)(Mx > \sim Px)$	5	0	1	1	0	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	1	0	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	1	0	1
	8	0	0	0	1	0	1

Form: IV-EIE						
	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\forall$
	S	M	P	$P > \sim M$	$M \wedge S$	$S > \sim P$
All P is not M.	1	1	1	0	1	0
Some M is S.	2	1	0	1	1	1
$\therefore$ All S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\forall x)(Px > \sim Mx)$	5	0	1	1	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: I-EII							
	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\exists$	
	S	M	P	$M > \sim P$	$S \wedge M$	$S \wedge P$	
All M is not P.	1	1	1	0	1	1	
Some S is M.	2	1	0	1	1	0	
$\therefore$ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	1	0	
$(\forall x)(Mx > \sim Px)$	5	0	1	1	0	0	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	1	0	
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0	
	8	0	0	0	1	0	

Form: II-EII

	$\exists \quad \exists \quad \exists$			$\forall$	$\exists$	$\exists$
	S	M	P	$P > \sim M$	$S \wedge M$	$S \wedge P$
All P is not M.	1	1	1	0	1	1
<u>Some S is M.</u>	2	1	0	1	1	0
$\therefore$ Some S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\forall x) (Px > \sim Mx)$	5	0	1	0	0	0
<u><math>(\exists x) (Sx \wedge Mx)</math></u>	6	0	1	0	0	0
$\therefore (\exists x) (Sx \wedge Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: III-EII							
	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\exists$	
	S	M	P	$M > \sim P$	$M \wedge S$	$S \wedge P$	
All M is not P.	1	1	1	0	1	1	
Some M is S.	2	1	0	1	1	0	
$\therefore$ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	1	0	
$(\forall x)(Mx > \sim Px)$	5	0	1	1	0	0	
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	1	0	
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0	
	8	0	0	0	1	0	

Form: IV-EII							
	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\exists$	
	S	M	P	$P > \sim M$	$M \wedge S$	$S \wedge P$	
All P is not M.	1	1	1	0	1	1	
<u>Some M is S.</u>	2	1	1	0	1	0	
<u><math>\therefore</math> Some S is P.</u>	3	1	0	1	0	1	
	4	1	0	0	1	0	
$(\forall x)(Px > \sim Mx)$	5	0	1	1	0	0	
<u><math>(\exists x)(Mx \wedge Sx)</math></u>	6	0	1	0	1	0	
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0	
	8	0	0	0	1	0	

Form: I-EIO (15, 19, 24)							
	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\exists$	
	S	M	P	$M > \sim P$	$S \wedge M$	$S \wedge \sim P$	
All M is not P.	1	1	1	0	1	0	
Some S is M.	2	1	1	0	1	1	
∴ Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	1	1	
$(\forall x)(Mx > \sim Px)$	5	0	1	1	0	0	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	1	0	
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	1	0	

Form: II-EIO (15, 19, 24)							
		∃	∃	∃	∀	∃	∃
		S	M	P	P > ~M	S ∧ M	S ∧ ~P
All P is not M.	1	1	1	1	0	1	0
Some S is M.	2	1	1	0	1	1	1
Some S is not P.	3	1	0	1	1	0	0
	4	1	0	0	1	0	1
(∀x) (Px > ~Mx)	5	0	1	1	0	0	0
(∃x) (Sx ∧ Mx)	6	0	1	0	1	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0	0
	8	0	0	0	1	0	0

Form: III-EIO (15, 19, 24)							
	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	$\exists$	
	S	M	P	$M > \sim P$	$M \wedge S$	$S \wedge \sim P$	
All M is not P.	1	1	1	0	1	0	
Some M is S.	2	1	1	0	1	1	
Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	1	1	
$(\forall x)(Mx > \sim Px)$	5	0	1	1	0	0	
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	1	0	
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	1	0	

					Form: IV-EIO (15, 19, 24)		
		∃	∃	∃	∀	∃	∃
		S	M	P	P > *M	M ∧ S	S ∧ *P
All P is not M.	1	1	1	1	0	1	0
Some M is S.	2	1	1	0	1	1	1
∴ Some S is not P.	3	1	0	1	1	0	0
	4	1	0	0	1	0	1
(∀x) (Px > *Mx)	5	0	1	1	0	0	0
(∃x) (Mx ∧ Sx)	6	0	1	0	1	0	0
∴ (∃x) (Sx ∧ *Px)	7	0	0	1	1	0	0
	8	0	0	0	1	0	0

Form: I-EOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > ~P	S ∧ ~M	S > P
All M is not P. Some S is not M.	1	1	1	0	0	1
∴ All S is P.	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > ~Px)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: II-EOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > ~M	S ∧ ~M	S > P
All P is not M. Some S is not M.	1	1	1	0	0	1
∴ All S is P.	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Px > ~Mx)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: III-EOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > ~P	M ∧ ~S	S > P
All M is not P. Some M is not S.	1	1	1	0	0	1
∴ All S is P.	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Mx > ~Px)	5	0	1	1	0	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: IV-EOA						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > ~M	M ∧ ~S	S > P
All P is not M. Some M is not S.	1	1	1	0	0	1
∴ All S is P.	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > ~Mx)	5	0	1	1	0	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	1
∴ (∀x) (Sx > Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: I-EOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > ~P	S ∧ ~M	S > ~P
All M is not P. Some S is not M.	1	1	1	0	0	0
∴ All S is not P.	2	1	1	0	1	0
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > ~Px)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: II-EOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > ~M	S ∧ ~M	S > ~P
All P is not M. Some S is not M.	1	1	1	0	0	0
∴ All S is not P.	2	1	1	0	1	0
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Px > ~Mx)	5	0	1	1	0	1
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: III-EOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	M > ~P	M ∧ ~S	S > ~P
All M is not P. Some M is not S.	1	1	1	0	0	0
∴ All S is not P.	2	1	1	0	1	0
	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Mx > ~Px)	5	0	1	1	0	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: IV-EOE						
	∃	∃	∃	∀	∃	∀
	S	M	P	P > ~M	M ∧ ~S	S > ~P
All P is not M. Some M is not S.	1	1	1	0	0	0
∴ All S is not P.	2	1	1	0	1	0
	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Px > ~Mx)	5	0	1	1	0	1
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	1	0
	8	0	0	0	1	1

Form: I-EOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > ~P	S ∧ ~M	S ∧ P
All M is not P. Some S is not M.	1	1	1	0	0	1
∴ Some S is P.	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Mx > ~Px)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: II-EOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > ~M	S ∧ ~M	S ∧ P
All P is not M. Some S is not M.	1	1	1	0	0	1
∴ Some S is P.	2	1	1	0	1	0
	3	1	0	1	1	1
	4	1	0	0	1	0
(∀x) (Px > ~Mx)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: III-EOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > ~P	M ∧ ~S	S ∧ P
All M is not P. Some M is not S.	1	1	1	0	0	1
∴ Some S is P.	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Mx > ~Px)	5	0	1	1	0	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: IV-EOI						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > ~M	M ∧ ~S	S ∧ P
All P is not M. Some M is not S.	1	1	1	0	0	1
∴ Some S is P.	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	1	0
(∀x) (Px > ~Mx)	5	0	1	1	0	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: I-EOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > ~P	S ∧ ~M	S ∧ ~P
All M is not P. Some S is not M.	1	1	1	0	0	0
∴ Some S is not P.	2	1	1	0	1	0
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Mx > ~Px)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: II-EOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > ~M	S ∧ ~M	S ∧ ~P
All P is not M. Some S is not M.	1	1	1	0	0	0
∴ Some S is not P.	2	1	1	0	1	0
	3	1	0	1	1	0
	4	1	0	0	1	1
(∀x) (Px > ~Mx)	5	0	1	1	0	0
(∃x) (Sx ∧ ~Mx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: III-EOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	M > ~P	M ∧ ~S	S ∧ ~P
All M is not P. Some M is not S.	1	1	1	0	0	0
∴ Some S is not P.	2	1	1	0	1	0
	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Mx > ~Px)	5	0	1	1	0	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0

Form: IV-EOO						
	∃	∃	∃	∀	∃	∃
	S	M	P	P > ~M	M ∧ ~S	S ∧ ~P
All P is not M. Some M is not S.	1	1	1	0	0	0
∴ Some S is not P.	2	1	1	0	1	0
	3	1	0	1	0	0
	4	1	0	0	1	0
(∀x) (Px > ~Mx)	5	0	1	1	0	0
(∃x) (Mx ∧ ~Sx)	6	0	1	0	1	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	1	0
	8	0	0	0	1	0





Form: I-IEA

	∃	∃	∃	∃	∀	∀
	S	M	P	M ∧ P	S > ~M	S > P
Some M is P. All S is not M.	1	1	1	1	0	1
∴ All S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	1
(∀x)(Sx > ~Mx)	6	0	1	0	0	1
∴ (∀x)(Sx > Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-IEA

	∃	∃	∃	∃	∀	∀
	S	M	P	P ∧ M	S > ~M	S > P
Some P is M. All S is not M.	1	1	1	1	0	1
∴ All S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	1
(∀x)(Sx > ~Mx)	6	0	1	0	0	1
∴ (∀x)(Sx > Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: III-IEA

	∃	∃	∃	∃	∀	∀
	S	M	P	M ∧ P	M > ~S	S > P
Some M is P. All M is not S.	1	1	1	1	0	1
∴ All S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	1
(∀x)(Mx > ~Sx)	6	0	1	0	0	1
∴ (∀x)(Sx > Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-IEA

	∃	∃	∃	∃	∀	∀
	S	M	P	P ∧ M	M > ~S	S > P
Some P is M. All M is not S.	1	1	1	1	0	1
∴ All S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	1
(∀x)(Mx > ~Sx)	6	0	1	0	0	1
∴ (∀x)(Sx > Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: I-IEE

	∃	∃	∃	∃	∀	∀
	S	M	P	M ∧ P	S > ~M	S > ~P
Some M is P. All S is not M.	1	1	1	1	0	0
∴ All S is not P.	2	1	1	0	0	1
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	1
(∀x)(Sx > ~Mx)	6	0	1	0	0	1
∴ (∀x)(Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-IEE

	∃	∃	∃	∃	∀	∀
	S	M	P	P ∧ M	S > ~M	S > ~P
Some P is M. All S is not M.	1	1	1	1	0	0
∴ All S is not P.	2	1	1	0	0	1
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	1
(∀x)(Sx > ~Mx)	6	0	1	0	0	1
∴ (∀x)(Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: III-IEE

	∃	∃	∃	∃	∀	∀
	S	M	P	M ∧ P	M > ~S	S > ~P
Some M is P. All M is not S.	1	1	1	1	0	0
∴ All S is not P.	2	1	1	0	0	1
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	1
(∀x)(Mx > ~Sx)	6	0	1	0	0	1
∴ (∀x)(Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-IEE

	∃	∃	∃	∃	∀	∀
	S	M	P	P ∧ M	M > ~S	S > ~P
Some P is M. All M is not S.	1	1	1	1	0	0
∴ All S is not P.	2	1	1	0	0	1
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	1
(∀x)(Mx > ~Sx)	6	0	1	0	0	1
∴ (∀x)(Sx > ~Px)	7	0	0	1	0	1
	8	0	0	0	0	1

Form: I-IEI

	∃	∃	∃	∃	∀	∃
	S	M	P	M ∧ P	S > ~M	S ∧ P
Some M is P. All S is not M.	1	1	1	1	0	1
∴ Some S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	0
(∀x)(Sx > ~Mx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: II-IEI

	∃	∃	∃	∃	∀	∃
	S	M	P	P ∧ M	S > ~M	S ∧ P
Some P is M. All S is not M.	1	1	1	1	0	1
∴ Some S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	0
(∀x)(Sx > ~Mx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: III-IEI

	∃	∃	∃	∃	∀	∃
	S	M	P	M ∧ P	M > ~S	S ∧ P
Some M is P. All M is not S.	1	1	1	1	0	1
∴ Some S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	0
(∀x)(Mx > ~Sx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-IEI

	∃	∃	∃	∃	∀	∃
	S	M	P	P ∧ M	M > ~S	S ∧ P
Some P is M. All M is not S.	1	1	1	1	0	1
∴ Some S is P.	2	1	1	0	0	0
	3	1	0	1	0	1
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	0
(∀x)(Mx > ~Sx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: I-IEO

	∃	∃	∃	∃	∀	∃
	S	M	P	M ∧ P	S > ~M	S ∧ ~P
Some M is P. All S is not M.	1	1	1	1	0	0
∴ Some S is not P.	2	1	1	0	0	1
	3	1	0	1	0	0
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	0
(∀x)(Sx > ~Mx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: II-IEO

	∃	∃	∃	∃	∀	∃
	S	M	P	P ∧ M	S > ~M	S ∧ ~P
Some P is M. All S is not M.	1	1	1	1	0	0
∴ Some S is not P.	2	1	1	0	0	1
	3	1	0	1	0	0
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	0
(∀x)(Sx > ~Mx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: III-IEO

	∃	∃	∃	∃	∀	∃
	S	M	P	M ∧ P	M > ~S	S ∧ ~P
Some M is P. All M is not S.	1	1	1	1	0	0
∴ Some S is not P.	2	1	1	0	0	1
	3	1	0	1	0	0
	4	1	0	0	0	1
(∃x)(Mx ∧ Px)	5	0	1	1	1	0
(∀x)(Mx > ~Sx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-IEO

	∃	∃	∃	∃	∀	∃
	S	M	P	P ∧ M	M > ~S	S ∧ ~P
Some P is M. All M is not S.	1	1	1	1	0	0
∴ Some S is not P.	2	1	1	0	0	1
	3	1	0	1	0	0
	4	1	0	0	0	1
(∃x)(Px ∧ Mx)	5	0	1	1	1	0
(∀x)(Mx > ~Sx)	6	0	1	0	0	0
∴ (∃x)(Sx ∧ ~Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: I-IIA							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$M \wedge P$	$S \wedge M$	$S > P$	
Some M is P.	1	1	1	1	1	1	
Some S is M.	2	1	1	0	1	0	
$\therefore$ All S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	1	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	1	
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: II-IIA							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$P \wedge M$	$S \wedge M$	$S > P$	
Some P is M.	1	1	1	1	1	1	
Some S is M.	2	1	1	0	1	0	
$\therefore$ All S is P.	3	1	0	1	0	0	1
	4	1	0	0	0	0	0
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	0	1
	8	0	0	0	0	0	1

Form: III-IIA						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$M \wedge P$	$M \wedge S$	$S > P$
Some M is P.	1	1	1	1	1	1
Some M is S.	2	1	1	0	1	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-IIA						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$P \wedge M$	$M \wedge S$	$S > P$
Some P is M.	1	1	1	1	1	1
Some M is S.	2	1	1	0	1	0
<u><math>\therefore</math> All S is P.</u>	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	1
<u><math>\therefore (\forall x)(Sx &gt; Px)</math></u>	7	0	0	1	0	1
	8	0	0	0	0	1

Form: I-IIE							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$M \wedge P$	$S \wedge M$	$S >^* P$	
Some M is P.	1	1	1	1	1	0	
Some S is M.	2	1	1	0	1	1	
$\therefore$ All S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	1	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	1	
$\therefore (\forall x)(Sx >^* Px)$	7	0	0	1	0	0	1
	8	0	0	0	0	1	

Form: II-IIE							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$P \wedge M$	$S \wedge M$	$S > \sim P$	
Some P is M.	1	1	1	1	1	0	
Some S is M.	2	1	1	0	1	1	
$\therefore$ All S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	1	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	1	
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: III-IIIe						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$M \wedge P$	$M \wedge S$	$S > \sim P$
Some M is P.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
$\therefore$ All S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-IIE

	$\exists \quad \exists \quad \exists$			$\exists$	$\exists$	$\forall$
	S	M	P	$P \wedge M$	$M \wedge S$	$S > "P$
Some P is M.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
$\therefore$ All S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > "Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: I-III							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$M \wedge P$	$S \wedge M$	$S \wedge P$	
Some M is P.	1	1	1	1	1	1	
<u>Some S is M.</u>	2	1	1	0	1	0	
$\therefore$ Some S is P.	3	1	0	1	0	0	1
$(\exists x)(Mx \wedge Px)$	4	1	0	0	0	0	0
$(\exists x)(Sx \wedge Px)$	5	0	1	1	1	0	0
<u><math>(\exists x)(Sx \wedge Mx)</math></u>	6	0	1	0	0	0	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: II-III							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$P \wedge M$	$S \wedge M$	$S \wedge P$	
Some P is M.	1	1	1	1	1	1	
Some S is M.	2	1	1	0	1	0	
$\therefore$ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	0	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: III-III						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
	S	M	P	$M \wedge P$	$M \wedge S$	$S \wedge P$
Some M is P.	1	1	1	1	1	1
Some M is S.	2	1	1	0	1	0
$\therefore$ Some S is P.	3	1	0	1	0	1
$(\exists x)(Mx \wedge Px)$	4	1	0	0	0	0
$(\exists x)(Mx \wedge Sx)$	5	0	1	1	0	0
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-III							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$P \wedge M$	$M \wedge S$	$S \wedge P$	
Some P is M.	1	1	1	1	1	1	
<u>Some M is S.</u>	2	1	1	0	1	0	
$\therefore$ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	0	0
<u><math>(\exists x)(Mx \wedge Sx)</math></u>	6	0	1	0	0	0	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: I-IIO							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$M \wedge P$	$S \wedge M$	$S \wedge \neg P$	
Some M is P.	1	1	1	1	1	0	
Some S is M.	2	1	1	0	1	1	
Some S is not P.	3	1	0	1	0	0	
$(\exists x)(Mx \wedge Px)$	4	1	0	0	0	1	
$(\exists x)(Sx \wedge Px)$	5	0	1	1	1	0	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	
$\therefore (\exists x)(Sx \wedge \neg Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: II-IIO							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$P \wedge M$	$S \wedge M$	$S \wedge \sim P$	
Some P is M.	1	1	1	1	1	0	
Some S is M.	2	1	1	0	1	1	
Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	0	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: III-IIO						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
	S	M	P	$M \wedge P$	$M \wedge S$	$S \wedge \sim P$
Some M is P.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
Some S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	0
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	0
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-IIO						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
	S	M	P	$P \wedge M$	$M \wedge S$	$S \wedge \neg P$
Some P is M.	1	1	1	1	1	0
Some M is S.	2	1	1	0	1	1
$\therefore$ Some S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	0
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	0
$\therefore (\exists x)(Sx \wedge \neg Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: I-IOA							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$M \wedge P$	$S \wedge \sim M$	$S > P$	
Some M is P.	1	1	1	1	0	1	
Some S is not M.	2	1	0	0	0	0	
$\therefore$ All S is P.	3	1	0	1	0	1	
	4	1	0	0	0	1	
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	1	
$(\exists x)(Sx \wedge \sim Mx)$	6	0	1	0	0	1	
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: II-IOA							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$P \wedge M$	$S \wedge \sim M$	$S > P$	
Some P is M.	1	1	1	1	0	1	
Some S is not M.	2	1	1	0	0	0	
$\therefore$ All S is P.	3	1	0	1	0	1	
	4	1	0	0	1	0	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	1	
$(\exists x)(Sx \wedge \sim Mx)$	6	0	1	0	0	1	
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: III-IOA

	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$M \wedge P$	$M \wedge \sim S$	$S > P$
Some M is P.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Mx \wedge Px)$	5	0	1	1	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	1	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-IOA						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$P \wedge M$	$M \wedge \sim S$	$S > P$
Some P is M.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	0
	8	0	0	0	0	1

Form: I-IOE							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$M \wedge P$	$S \wedge M$	$S > P$	
Some M is P.	1	1	1	1	0	0	
Some S is not M.	2	1	0	0	0	1	
$\therefore$ All S is not P.	3	1	0	0	1	0	
	4	1	0	0	1	1	
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	1	
$(\exists x)(Sx \wedge \neg Mx)$	6	0	1	0	0	1	
$\therefore (\forall x)(Sx > \neg Px)$	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: II-IOE						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$P \wedge M$	$S \wedge \neg M$	$S > \neg P$
Some P is M.	1	1	1	1	0	0
Some S is not M.	2	1	0	0	0	1
$\therefore$ All S is not P.	3	1	0	0	1	0
	4	1	0	0	1	1
$(\exists x)(Px \wedge Mx)$	5	0	1	1	0	1
$(\exists x)(Sx \wedge \neg Mx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > \neg Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: III-IOE							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
		S	M	P	$M \wedge P$	$M \wedge \sim S$	$S > \sim P$
Some M is P.	1	1	1	1	1	0	0
Some M is not S.	2	1	1	0	0	0	1
$\therefore$ All S is not P.	3	1	0	1	0	0	0
	4	1	0	0	0	0	1
$(\exists x)(Mx \wedge Px)$	5	0	1	1	1	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	0	0	1
	8	0	0	0	0	0	1

Form: IV-IOE						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$P \wedge M$	$M \wedge \sim S$	$S > \sim P$
Some P is M.	1	1	1	1	0	0
Some M is not S.	2	1	1	0	0	1
$\therefore$ All S is not P.	3	1	0	1	0	0
	4	1	0	0	0	1
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	0	0
	8	0	0	0	0	1

Form: I-IOI							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
		S	M	P	$M \wedge P$	$S \wedge M$	$S \wedge P$
Some M is P.	1	1	1	1	1	0	1
<u>Some S is not M.</u>	2	1	1	0	0	0	0
$\therefore$ Some S is P.	3	1	0	1	0	1	1
	4	1	0	0	0	1	0
$(\exists x)(Mx \wedge Px)$	5	0	1	1	1	0	0
<u><math>(\exists x)(Sx \wedge \sim Mx)</math></u>	6	0	1	0	0	0	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: II-IOI							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$P \wedge M$	$S \wedge \sim M$	$S \wedge P$	
Some P is M.	1	1	1	1	0	1	
<u>Some S is not M.</u>	2	1	1	0	0	0	
$\therefore$ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	0	
<u><math>(\exists x)(Sx \wedge \sim Mx)</math></u>	6	0	1	0	0	0	
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: III-IOI						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
	S	M	P	$M \wedge P$	$M \wedge \sim S$	$S \wedge P$
Some M is P.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
$\therefore$ Some S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Mx \wedge Px)$	5	0	1	1	1	0
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-IOI						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
	S	M	P	$P \wedge M$	$M \wedge \sim S$	$S \wedge P$
Some P is M.	1	1	1	1	0	1
Some M is not S.	2	1	1	0	0	0
$\therefore$ Some S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	0
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: I-IOO							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$M \wedge P$	$S \wedge \sim M$	$S \wedge \sim P$	
Some M is P.	1	1	1	1	0	0	
<u>Some S is not M.</u>	2	1	0	0	0	1	
$\therefore$ Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Mx \wedge Px)$	5	0	1	1	0	0	
<u><math>(\exists x)(Sx \wedge \sim Mx)</math></u>	6	0	1	0	0	0	
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: II-IOO							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
		S	M	P	$P \wedge M$	$S \wedge \sim M$	$S \wedge \sim P$
Some P is M.	1	1	1	1	1	0	0
<u>Some S is not M.</u>	2	1	1	0	0	0	1
$\therefore$ Some S is not P.	3	1	0	1	0	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	0	0
<u><math>(\exists x)(Sx \wedge \sim Mx)</math></u>	6	0	1	0	0	0	0
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: III-100							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$M \wedge P$	$M \wedge \sim S$	$S \wedge \sim P$	
Some M is P.	1	1	1	1	0	0	
<u>Some M is not S.</u>	2	1	1	0	0	1	
$\therefore$ Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Mx \wedge Px)$	5	0	1	1	1	0	
<u><math>(\exists x)(Mx \wedge \sim Sx)</math></u>	6	0	1	0	1	0	
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: IV-IOO							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$P \wedge M$	$M \wedge \sim S$	$S \wedge \sim P$	
Some P is M.	1	1	1	1	0	0	
Some M is not S.	2	1	1	0	0	1	
$\therefore$ Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Px \wedge Mx)$	5	0	1	1	1	0	
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1	
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: I-OAA							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$M \wedge \sim P$	$S > M$	$S > P$	
Some M is not P. All S is M.	1	1	1	0	1	1	
∴ All S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	1
$(\forall x)(Sx > Mx)$	6	0	1	0	1	1	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	1	1
	8	0	0	0	0	1	1

Form: II-OAA							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$P \wedge \sim M$	$S > M$	$S > P$	
Some P is not M. All S is M.	1	1	1	0	1	1	
∴ All S is P.	2	1	1	0	0	1	0
	3	1	0	1	1	0	1
	4	1	0	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	1
$(\forall x)(Sx > Mx)$	6	0	1	0	0	1	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	1	1	1
	8	0	0	0	0	1	1

Form: III-OAA							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$M \wedge \sim P$	$M > S$	$S > P$	
Some M is not P. All M is S.	1	1	1	0	1	1	
∴ All S is P.	2	1	1	0	1	1	0
	3	1	0	1	0	1	1
	4	1	0	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0	1
$(\forall x)(Mx > Sx)$	6	0	1	0	1	0	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	1	1
	8	0	0	0	0	1	1

Form: IV-OAA							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$P \wedge \sim M$	$M > S$	$S > P$	
Some P is not M. All M is S.	1	1	1	0	1	1	
∴ All S is P.	2	1	1	0	0	1	0
	3	1	0	1	1	1	1
	4	1	0	0	0	1	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	1
$(\forall x)(Mx > Sx)$	6	0	1	0	0	0	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	1	1	1
	8	0	0	0	0	1	1

Form: I-OAE							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$M \wedge \sim P$	$S > M$	$S > \sim P$	
Some M is not P. All S is M.	1	1	1	0	1	0	
∴ All S is not P.	2	1	1	0	1	1	
	3	1	0	1	0	0	0
	4	1	0	0	0	0	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	1
$(\forall x)(Sx > Mx)$	6	0	1	0	1	1	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	0	1	1
	8	0	0	0	0	1	1

Form: II-OAE							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$P \wedge \sim M$	$S > M$	$S > \sim P$	
Some P is not M. All S is M.	1	1	1	0	1	0	
∴ All S is not P.	2	1	1	0	0	1	1
	3	1	0	1	1	0	0
	4	1	0	0	0	0	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	1
$(\forall x)(Sx > Mx)$	6	0	1	0	0	1	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	1	1	1
	8	0	0	0	0	1	1

Form: III-OAE							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$M \wedge \sim P$	$M > S$	$S > \sim P$	
Some M is not P. All M is S.	1	1	1	0	1	0	
∴ All S is not P.	2	1	1	0	1	1	
	3	1	0	1	0	1	0
	4	1	0	0	0	1	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0	1
$(\forall x)(Mx > Sx)$	6	0	1	0	1	0	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	0	1	1
	8	0	0	0	0	1	1

Form: IV-OAE							
	∃	∃	∃	∃	∀	∀	
	S	M	P	$P \wedge \sim M$	$M > S$	$S > \sim P$	
Some P is not M. All M is S.	1	1	1	0	1	0	
∴ All S is not P.	2	1	1	0	0	1	1
	3	1	0	1	1	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	1
$(\forall x)(Mx > Sx)$	6	0	1	0	0	0	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	1	1	1
	8	0	0	0	0	1	1

Form: I-OAI							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$M \wedge \sim P$	$S > M$	$S \wedge P$	
Some M is not P. All S is M.	1	1	1	0	1	1	
∴ Some S is P.	2	1	1	0	1	0	
	3	1	0	1	0	1	1
	4	1	0	0	0	0	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	0
$(\forall x)(Sx > Mx)$	6	0	1	0	1	0	0
∴ $(\exists x)(Sx \wedge Px)$	7	0	0	1	0	1	0
	8	0	0	0	0	1	0

Form: II-OAI							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$P \wedge \sim M$	$S > M$	$S \wedge P$	
Some P is not M. All S is M.	1	1	1	0	1	1	
∴ Some S is P.	2	1	1	0	0	1	0
	3	1	0	1	1	0	1
	4	1	0	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	0
$(\forall x)(Sx > Mx)$	6	0	1	0	0	1	0
∴ $(\exists x)(Sx \wedge Px)$	7	0	0	1	1	1	0
	8	0	0	0	0	1	0

Form: III-OAI							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$M \wedge \sim P$	$M > S$	$S \wedge P$	
Some M is not P. All M is S.	1	1	1	0	1	1	
∴ Some S is P.	2	1	1	0	1	0	
	3	1	0	1	0	1	1
	4	1	0	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0	0
$(\forall x)(Mx > Sx)$	6	0	1	0	1	0	0
∴ $(\exists x)(Sx \wedge Px)$	7	0	0	1	0	1	0
	8	0	0	0	0	1	0

Form: IV-OAI							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$P \wedge \sim M$	$M > S$	$S \wedge P$	
Some P is not M. All M is S.	1	1	1	0	1	1	
∴ Some S is P.	2	1	1	0	0	1	0
	3	1	0	1	1	1	1
	4	1	0	0	0	1	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	0
$(\forall x)(Mx > Sx)$	6	0	1	0	0	0	0
∴ $(\exists x)(Sx \wedge Px)$	7	0	0	1	1	1	0
	8	0	0	0	0	1	0

Form: I-OAO							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$M \wedge \sim P$	$S > M$	$S \wedge \sim P$	
Some M is not P. All S is M.	1	1	1	0	1	0	
∴ Some S is not P.	2	1	1	0	1	1	
	3	1	0	1	0	0	0
	4	1	0	0	0	0	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	0
$(\forall x)(Sx > Mx)$	6	0	1	0	1	0	0
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	1	0
	8	0	0	0	0	1	0

Form: II-OAO							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$P \wedge \sim M$	$S > M$	$S \wedge \sim P$	
Some P is not M. All S is M.	1	1	1	0	1	0	
∴ Some S is not P.	2	1	1	0	0	1	1
	3	1	0	1	1	0	0
	4	1	0	0	0	0	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	0
$(\forall x)(Sx > Mx)$	6	0	1	0	0	1	0
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	1	1	0
	8	0	0	0	0	1	0

Form: III-OAO (15, 19, 24)							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$M \wedge \sim P$	$M > S$	$S \wedge \sim P$	
Some M is not P. All M is S.	1	1	1	0	1	0	
∴ Some S is not P.	2	1	1	0	1	1	
	3	1	0	1	0	1	0
	4	1	0	0	0	1	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0	0
$(\forall x)(Mx > Sx)$	6	0	1	0	1	0	0
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	1	0
	8	0	0	0	0	1	0

Form: IV-OAO							
	∃	∃	∃	∃	∀	∃	
	S	M	P	$P \wedge \sim M$	$M > S$	$S \wedge \sim P$	
Some P is not M. All M is S.	1	1	1	0	1	0	
∴ Some S is not P.	2	1	1	0	0	1	1
	3	1	0	1	1	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	0
$(\forall x)(Mx > Sx)$	6	0	1	0	0	0	0
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	1	1	0
	8	0	0	0	0	1	0

Form: I-OEA

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\forall$
	S	M	P	$M \wedge \sim P$	$S > \sim M$	$S > P$
Some M is not P.	1	1	1	0	0	1
<u>All S is not M.</u>	2	1	1	0	1	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1
<u><math>(\forall x)(Sx &gt; \sim Mx)</math></u>	6	0	1	0	1	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	1	1

Form: II-OEA							
	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\forall$	
	S	M	P	$P \wedge \sim M$	$S > \sim M$	$S > P$	
Some P is not M.	1	1	1	0	0	1	
<u>All S is not M.</u>	2	1	1	0	0	0	
$\therefore$ All S is P.	3	1	0	1	1	1	
	4	1	0	0	1	0	
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	1	1	
<u><math>(\forall x)(Sx &gt; \sim Mx)</math></u>	6	0	1	0	1	1	
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	1	1	
	8	0	0	0	1	1	

Form: III-OEA

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\forall$
	S	M	P	$M \wedge \sim P$	$M > \sim S$	$S > P$
Some M is not P.	1	1	1	0	0	1
All M is not S.	2	1	1	0	1	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1
$(\forall x)(Mx > \sim Sx)$	6	0	1	0	1	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	1	1

Form: IV-OEA							
		$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\forall$
		S	M	P	$P \wedge \sim M$	$M > \sim S$	$S > P$
Some P is not M.	1	1	1	1	0	0	1
All M is not S.	2	1	1	0	0	0	0
<u><math>\therefore</math> All S is P.</u>	3	1	0	1	1	1	1
	4	1	0	0	0	1	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	1
$(\forall x)(Mx > \sim Sx)$	6	0	1	0	0	1	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	1	1	1
	8	0	0	0	0	1	1

Form: I-OEE

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\forall$
	S	M	P	$M \wedge \sim P$	$S > \sim M$	$S > \sim P$
Some M is not P.	1	1	1	0	0	0
<u>All S is not M.</u>	2	1	1	0	1	1
$\therefore$ All S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	1	1
<u><math>(\forall x)(Sx &gt; \sim Mx)</math></u>	6	0	1	0	1	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	1	1
	8	0	0	0	1	1

Form: II-OEE

	$\exists \exists \exists$			$\exists$	$\forall$	$\forall$
	S	M	P	$P \wedge \sim M$	$S > \sim M$	$S > \sim P$
Some P is not M.	1	1	1	0	0	0
<u>All S is not M.</u>	2	1	1	0	0	1
$\therefore$ All S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1
<u><math>(\forall x)(Sx &gt; \sim Mx)</math></u>	6	0	1	0	1	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	1	1
	8	0	0	0	1	1

Form: III-OEE

	<div><div><div>∃</div><div>∃</div><div>∃</div></div><div><div>∃</div></div></div>	<div><div><div>∀</div></div><div><div>∀</div></div></div>
	<div><div>S</div><div>M</div><div>P</div></div>	<div><div><div><math>M \wedge \sim P</math></div></div><div><div><math>M &gt; \sim S</math></div></div><div><div><math>S &gt; \sim P</math></div></div></div>
Some M is not P.	<div><div>1</div><div>1</div><div>1</div><div>1</div></div>	<div><div>0</div><div>0</div><div>0</div></div>
<u>All M is not S.</u>	<div><div>2</div><div>1</div><div>1</div><div>0</div></div>	<div><div>1</div><div>0</div><div>1</div></div>
∴ All S is not P.	<div><div>3</div><div>1</div><div>0</div><div>1</div></div>	<div><div>0</div><div>1</div><div>0</div></div>
	<div><div>4</div><div>1</div><div>0</div><div>0</div></div>	<div><div>0</div><div>1</div><div>1</div></div>
$(\exists x)(Mx \wedge \sim Px)$	<div><div>5</div><div>0</div><div>1</div><div>1</div></div>	<div><div>0</div><div>1</div><div>1</div></div>
<u><math>(\forall x)(Mx &gt; \sim Sx)</math></u>	<div><div>6</div><div>0</div><div>1</div><div>0</div></div>	<div><div>1</div><div>1</div><div>1</div></div>
∴ $(\forall x)(Sx > \sim Px)$	<div><div>7</div><div>0</div><div>0</div><div>1</div></div>	<div><div>1</div><div>1</div><div>1</div></div>
	<div><div>8</div><div>0</div><div>0</div><div>0</div></div>	<div><div>1</div><div>1</div><div>1</div></div>

Form: IV-OEE							
		$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\forall$
		S	M	P	$P \wedge \sim M$	$M > \sim S$	$S > \sim P$
Some P is not M.	1	1	1	1	0	0	0
All M is not S.	2	1	1	0	0	0	1
$\therefore$ All S is not P.	3	1	0	1	1	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	1
$(\forall x)(Mx > \sim Sx)$	6	0	1	0	0	1	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	1	1	1
	8	0	0	0	0	1	1

Form: I-OEI							
	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	
	S	M	P	$M \wedge \sim P$	$S > \sim M$	$S \wedge P$	
Some M is not P.	1	1	1	0	0	1	
<u>All S is not M.</u>	2	1	0	1	0	0	
$\therefore$ Some S is P.	3	1	0	1	1	1	
	4	1	0	0	1	0	
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	0
$(\forall x)(Sx > \sim Mx)$	6	0	1	0	1	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	1	0
	8	0	0	0	0	1	0

Form: II-OEI							
	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$	
	S	M	P	$P \wedge \sim M$	$S > \sim M$	$S \wedge P$	
Some P is not M.	1	1	1	0	0	1	
<u>All S is not M.</u>	2	1	0	0	0	0	
$\therefore$ Some S is P.	3	1	0	1	1	1	
	4	1	0	0	1	0	
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	1	0	
$(\forall x)(Sx > \sim Mx)$	6	0	1	0	1	0	
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0	
	8	0	0	0	1	0	

Form: III-OEI

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$
	S	M	P	$M \wedge \sim P$	$M > \sim S$	$S \wedge P$
Some M is not P.	1	1	1	0	0	1
<u>All M is not S.</u>	2	1	0	1	0	0
$\therefore$ Some S is P.	3	1	0	0	1	1
	4	1	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	0	1	0
<u><math>(\forall x)(Mx &gt; \sim Sx)</math></u>	6	0	1	0	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0
	8	0	0	0	1	0

Form: IV-OEI							
		$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$
		S	M	P	$P \wedge \sim M$	$M > \sim S$	$S \wedge P$
Some P is not M.	1	1	1	1	0	0	1
All M is not S.	2	1	1	0	0	0	0
<u><math>\therefore</math> Some S is P.</u>	3	1	0	1	1	1	1
	4	1	0	0	0	1	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	0
<u><math>(\forall x)(Mx &gt; \sim Sx)</math></u>	6	0	1	0	0	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	1	0
	8	0	0	0	0	1	0

Form: I-OEO

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$
	S	M	P	$M \wedge \sim P$	$S > \sim M$	$S \wedge \sim P$
Some M is not P.	1	1	1	0	0	0
<u>All S is not M.</u>	2	1	1	1	0	1
$\therefore$ Some S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0
$(\forall x)(Sx > \sim Mx)$	6	0	1	0	1	0
<u><math>\therefore (\exists x)(Sx \wedge \sim Px)</math></u>	7	0	0	1	1	0
	8	0	0	0	1	0

Form: II-OEO

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$
	S	M	P	$P \wedge \sim M$	$S > \sim M$	$S \wedge \sim P$
Some P is not M.	1	1	1	0	0	0
<u>All S is not M.</u>	2	1	1	0	0	1
$\therefore$ Some S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0
$(\forall x)(Sx > \sim Mx)$	6	0	1	0	1	0
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	1	0
	8	0	0	0	1	0

Form: III-OEO

	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$
	S	M	P	$M \wedge \neg P$	$M > \neg S$	$S \wedge \neg P$
Some M is not P.	1	1	1	0	0	0
All M is not S.	2	1	1	1	0	1
$\therefore$ Some S is not P.	3	1	0	1	1	0
	4	1	0	0	1	1
$(\exists x)(Mx \wedge \neg Px)$	5	0	1	1	1	0
$(\forall x)(Mx > \neg Sx)$	6	0	1	0	1	0
$\therefore (\exists x)(Sx \wedge \neg Px)$	7	0	0	1	1	0
	8	0	0	0	1	0

Form: IV-OEO							
		$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	$\exists$
		S	M	P	$P \wedge \neg M$	$M > \neg S$	$S \wedge \neg P$
Some P is not M.	1	1	1	1	0	0	0
All M is not S.	2	1	1	0	0	0	1
$\therefore$ Some S is not P.	3	1	0	1	1	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge \neg Mx)$	5	0	1	1	0	1	0
$(\forall x)(Mx > \neg Sx)$	6	0	1	0	0	1	0
$\therefore (\exists x)(Sx \wedge \neg Px)$	7	0	0	1	1	1	0
	8	0	0	0	0	1	0

Form: I-OIA						
	∃	∃	∃	∃	∃	∀
	S	M	P	$M \wedge \sim P$	$S \wedge M$	$S > P$
Some M is not P. Some S is M. ∴ All S is P.	1	1	1	0	1	1
	2	1	1	0	1	0
	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	1	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-OIA

	∃	∃	∃	∃	∃	∀
	S	M	P	$P \wedge \sim M$	$S \wedge M$	$S > P$
Some P is not M.	1	1	1	0	1	1
Some S is M.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: III-OIA

	∃	∃	∃	∃	∃	∀
	S	M	P	$M \wedge \sim P$	$M \wedge S$	$S > P$
Some M is not P.	1	1	1	0	1	1
<u>Some M is S.</u>	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1
<u><math>(\exists x)(Mx \wedge Sx)</math></u>	6	0	1	0	1	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: IV-OIA

	∃	∃	∃	∃	∃	∀
	S	M	P	$P \wedge \sim M$	$M \wedge S$	$S > P$
Some P is not M.	1	1	1	0	1	1
Some M is S.	2	1	1	0	1	0
∴ All S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: I-OIE							
	∃	∃	∃	∃	∃	∀	
	S	M	P	M ∧ ~P	S ∧ M	S > ~P	
Some M is not P.	1	1	1	0	1	0	
<u>Some S is M.</u>	2	1	1	0	1	1	
∴ All S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
(∃x) (Mx ∧ ~Px)	5	0	1	1	0	1	
<u>(∃x) (Sx ∧ Mx)</u>	6	0	1	0	1	0	
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: II-OIE							
	∃	∃	∃	∃	∃	∀	
	S	M	P	$P \wedge \sim M$	$S \wedge M$	$S > \sim P$	
Some P is not M.	1	1	1	1	0	1	0
Some S is M.	2	1	1	0	0	1	1
∴ All S is not P.	3	1	0	1	1	0	0
	4	1	0	0	0	0	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	1
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	1	0	1
	8	0	0	0	0	0	1

Form: III-OIE							
	∃	∃	∃	∃	∃	∀	
	S	M	P	M ∧ ~P	M ∧ S	S > ~P	
Some M is not P.	1	1	1	0	1	0	
Some M is S.	2	1	1	0	1	1	
∴ All S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
(∃x) (Mx ∧ ~Px)	5	0	1	1	0	0	1
(∃x) (Mx ∧ Sx)	6	0	1	0	1	0	1
∴ (∀x) (Sx > ~Px)	7	0	0	1	0	0	1
	8	0	0	0	0	0	1

Form: IV-OIE							
	∃	∃	∃	∃	∃	∀	
	S	M	P	$P \wedge \sim M$	$M \wedge S$	$S > \sim P$	
Some P is not M. Some M is S. ∴ All S is not P.	1	1	1	1	0	1	0
	2	1	1	0	0	1	1
	3	1	0	1	1	0	0
	4	1	0	0	0	0	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	1
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	0	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	1	0	1
	8	0	0	0	0	0	1

Form: I-OII							
		∃	∃	∃	∃	∃	∃
		S	M	P	M ∧ ~P	S ∧ M	S ∧ P
Some M is not P.	1	1	1	1	0	1	1
<u>Some S is M.</u>	2	1	1	0	1	1	0
∴ Some S is P.	3	1	0	1	0	0	1
	4	1	0	0	0	0	0
(∃x) (Mx ∧ ~Px)	5	0	1	1	0	0	0
(∃x) (Sx ∧ Mx)	6	0	1	0	1	0	0
∴ (∃x) (Sx ∧ Px)	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: II-OII

		∃	∃	∃	∃	∃	∃
		S	M	P	$P \wedge \sim M$	$S \wedge M$	$S \wedge P$
Some P is not M.	1	1	1	1	0	1	1
<u>Some S is M.</u>	2	1	1	0	0	1	0
∴ Some S is P.	3	1	0	1	1	0	1
	4	1	0	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	0
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	0
<u>∴ <math>(\exists x)(Sx \wedge Px)</math></u>	7	0	0	1	1	0	0
	8	0	0	0	0	0	0

Form: III-OII

	∃	∃	∃	∃	∃	∃
	S	M	P	M ∧ ~P	M ∧ S	S ∧ P
Some M is not P.	1	1	1	0	1	1
<u>Some M is S.</u>	2	1	1	0	1	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
(∃x)(Mx ∧ ~Px)	5	0	1	1	0	0
<u>(∃x)(Mx ∧ Sx)</u>	6	0	1	0	1	0
∴ (∃x)(Sx ∧ Px)	7	0	0	1	0	0
	8	0	0	0	0	0

Form: IV-OII

	∃	∃	∃	∃	∃	∃
	S	M	P	$P \wedge \sim M$	$M \wedge S$	$S \wedge P$
Some P is not M.	1	1	1	0	1	1
<u>Some M is S.</u>	2	1	1	0	1	0
∴ Some S is P.	3	1	0	1	0	1
	4	1	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0
$(\exists x)(Mx \wedge Sx)$	6	0	1	0	0	0
<u>∴ <math>(\exists x)(Sx \wedge Px)</math></u>	7	0	0	1	0	0
	8	0	0	0	0	0

Form: I-OIO							
		∃	∃	∃	∃	∃	∃
		S	M	P	M ∧ ~P	S ∧ M	S ∧ ~P
Some M is not P.	1	1	1	1	0	1	0
Some S is M.	2	1	1	0	1	1	1
∴ Some S is not P.	3	1	0	1	0	0	0
	4	1	0	0	0	0	1
(∃x) (Mx ∧ ~Px)	5	0	1	1	0	0	0
(∃x) (Sx ∧ Mx)	6	0	1	0	1	0	0
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: II-OIO							
	∃	∃	∃	∃	∃	∃	
	S	M	P	$P \wedge \sim M$	$S \wedge M$	$S \wedge \sim P$	
Some P is not M.	1	1	1	0	1	0	
Some S is M.	2	1	1	0	1	1	
∴ Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	
$(\exists x)(Sx \wedge Mx)$	6	0	1	0	0	0	
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: III-OIO							
	∃	∃	∃	∃	∃	∃	
	S	M	P	M ∧ ~P	M ∧ S	S ∧ ~P	
Some M is not P.	1	1	1	0	1	0	
Some M is S.	2	1	1	0	1	1	
Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
(∃x) (Mx ∧ ~Px)	5	0	1	1	0	0	
(∃x) (Mx ∧ Sx)	6	0	1	0	1	0	
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: IV-OIO							
	∃	∃	∃	∃	∃	∃	
	S	M	P	P ∧ ~M	M ∧ S	S ∧ ~P	
Some P is not M.	1	1	1	0	1	0	
Some M is S.	2	1	1	0	1	1	
Some S is not P.	3	1	0	1	0	0	
	4	1	0	0	0	1	
(∃x) (Px ∧ ~Mx)	5	0	1	1	0	0	
(∃x) (Mx ∧ Sx)	6	0	1	0	0	0	
∴ (∃x) (Sx ∧ ~Px)	7	0	0	1	0	0	
	8	0	0	0	0	0	

Form: I-OOA						
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
	S	M	P	$M \wedge \sim P$	$S \wedge \sim M$	$S > P$
Some M is not P.	1	1	1	0	0	1
Some S is not M.	2	1	1	0	0	0
$\therefore$ All S is P.	3	1	0	1	0	1
	4	1	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1
$(\exists x)(Sx \wedge \sim Mx)$	6	0	1	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	0	1
	8	0	0	0	0	1

Form: II-OOA							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
		S	M	P	$P \wedge \sim M$	$S \wedge \sim M$	$S > P$
Some P is not M.	1	1	1	1	0	0	1
Some S is not M.	2	1	1	0	0	0	0
$\therefore$ All S is P.	3	1	0	1	1	1	1
	4	1	0	0	0	1	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	1
$(\exists x)(Sx \wedge \sim Mx)$	6	0	1	0	0	0	1
$\therefore (\forall x)(Sx > Px)$	7	0	0	1	1	0	1
	8	0	0	0	0	0	1

Form: III-OOA							
		∃	∃	∃	∃	∃	∀
		S	M	P	$M \wedge \sim P$	$M \wedge \sim S$	$S > P$
Some M is not P.	1	1	1	1	0	0	1
Some M is not S.	2	1	1	0	1	0	0
∴ All S is P.	3	1	0	1	0	0	1
	4	1	0	0	0	0	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	1	1	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	0	0	1
	8	0	0	0	0	0	1

Form: IV-OOA							
		∃	∃	∃	∃	∃	∀
		S	M	P	$P \wedge \sim M$	$M \wedge \sim S$	$S > P$
Some P is not M.	1	1	1	1	0	0	1
Some M is not S.	2	1	1	0	0	0	0
∴ All S is P.	3	1	0	1	1	0	1
	4	1	0	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1	1
∴ $(\forall x)(Sx > Px)$	7	0	0	1	1	0	1
	8	0	0	0	0	0	1

Form: I-OOE							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$	
	S	M	P	$M \wedge \sim P$	$S \wedge \sim M$	$S > \sim P$	
Some M is not P.	1	1	1	0	0	0	
Some S is not M.	2	1	1	0	0	1	
<hr/> ∴ All S is not P.	3	1	0	1	0	0	
	4	1	0	0	1	1	
( $\exists x$ )( $Mx \wedge \sim Px$ )	5	0	1	1	0	1	
( $\exists x$ )( $Sx \wedge \sim Mx$ )	6	0	1	0	1	1	
∴ ( $\forall x$ )( $Sx > \sim Px$ )	7	0	0	1	0	1	
	8	0	0	0	0	1	

Form: II-OOE							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
		S	M	P	$P \wedge \sim M$	$S \wedge \sim M$	$S > \sim P$
Some P is not M.	1	1	1	1	0	0	0
Some S is not M.	2	1	1	0	0	0	1
$\therefore$ All S is not P.	3	1	0	1	1	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	1
$(\exists x)(Sx \wedge \sim Mx)$	6	0	1	0	0	0	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	1	0	1
	8	0	0	0	0	0	1

Form: III-OOE							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\forall$
		S	M	P	$M \wedge \sim P$	$M \wedge \sim S$	$S > \sim P$
Some M is not P.	1	1	1	1	0	0	0
Some M is not S.	2	1	1	0	1	0	1
$\therefore$ All S is not P.	3	1	0	1	0	0	0
	4	1	0	0	0	0	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	1	1	1
$\therefore (\forall x)(Sx > \sim Px)$	7	0	0	1	0	0	1
	8	0	0	0	0	0	1

Form: IV-OOE							
		∃	∃	∃	∃	∃	∀
		S	M	P	$P \wedge \sim M$	$M \wedge \sim S$	$S > \sim P$
Some P is not M.	1	1	1	1	0	0	0
Some M is not S.	2	1	1	0	0	0	1
∴ All S is not P.	3	1	0	1	1	0	0
	4	1	0	0	0	0	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	1
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1	1
∴ $(\forall x)(Sx > \sim Px)$	7	0	0	1	1	0	1
	8	0	0	0	0	0	1

Form: I-OOI

	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
	S	M	P	$M \wedge \sim P$	$S \wedge \sim M$	$S \wedge P$
Some M is not P.	1	1	1	0	0	1
<u>Some S is not M.</u>	2	1	1	0	0	0
$\therefore$ Some S is P.	3	1	0	1	1	1
	4	1	0	0	1	0
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0
<u><math>(\exists x)(Sx \wedge \sim Mx)</math></u>	6	0	1	0	0	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0
	8	0	0	0	0	0

Form: II-OOI							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
		S	M	P	$P \wedge \neg M$	$S \wedge \neg M$	$S \wedge P$
Some P is not M.	1	1	1	1	0	0	1
<u>Some S is not M.</u>	2	1	1	0	0	0	0
$\therefore$ Some S is P.	3	1	0	1	1	1	1
	4	1	0	0	0	1	0
$(\exists x)(Px \wedge \neg Mx)$	5	0	1	1	0	0	0
<u><math>(\exists x)(Sx \wedge \neg Mx)</math></u>	6	0	1	0	0	0	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0	0
	8	0	0	0	0	0	0

Form: III-OOI							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$M \wedge \sim P$	$M \wedge \sim S$	$S \wedge P$	
Some M is not P.	1	1	1	0	0	1	
<u>Some M is not S.</u>	2	1	1	0	1	0	
$\therefore$ Some S is P.	3	1	0	1	0	1	
	4	1	0	0	0	0	
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	0
<u><math>(\exists x)(Mx \wedge \sim Sx)</math></u>	6	0	1	0	1	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: IV-OOI							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
		S	M	P	$P \wedge \sim M$	$M \wedge \sim S$	$S \wedge P$
Some P is not M.	1	1	1	1	0	0	1
Some M is not S.	2	1	1	0	0	0	0
$\therefore$ Some S is P.	3	1	0	1	1	0	1
	4	1	0	0	0	0	0
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	0
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1	0
$\therefore (\exists x)(Sx \wedge Px)$	7	0	0	1	1	0	0
	8	0	0	0	0	0	0

Form: I-OOO							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
		S	M	P	$M \wedge \sim P$	$S \wedge \sim M$	$S \wedge \sim P$
Some M is not P.	1	1	1	1	0	0	0
Some S is not M.	2	1	1	0	1	0	1
$\therefore$ Some S is not P.	3	1	0	1	0	1	0
	4	1	0	0	0	1	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	0	0
$(\exists x)(Sx \wedge \sim Mx)$	6	0	0	1	1	0	0
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: II-OOO							
		$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$
		S	M	P	$P \wedge \sim M$	$S \wedge \sim M$	$S \wedge \sim P$
Some P is not M.	1	1	1	1	0	0	0
<u>Some S is not M.</u>	2	1	1	0	0	0	1
$\therefore$ Some S is not P.	3	1	0	1	1	1	0
	4	1	0	0	0	1	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	0	0
<u><math>(\exists x)(Sx \wedge \sim Mx)</math></u>	6	0	1	0	0	0	0
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	1	0	0
	8	0	0	0	0	0	0

Form: III-000							
	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	$\exists$	
	S	M	P	$M \wedge \sim P$	$M \wedge \sim S$	$S \wedge \sim P$	
Some M is not P.	1	1	1	0	0	0	
<u>Some M is not S.</u>	2	1	1	0	1	0	1
$\therefore$ Some S is not P.	3	1	0	1	0	0	0
	4	1	0	0	0	0	1
$(\exists x)(Mx \wedge \sim Px)$	5	0	1	1	0	1	0
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	1	1	0
$\therefore (\exists x)(Sx \wedge \sim Px)$	7	0	0	1	0	0	0
	8	0	0	0	0	0	0

Form: IV-OOO							
		∃	∃	∃	∃	∃	∃
		S	M	P	$P \wedge \sim M$	$M \wedge \sim S$	$S \wedge \sim P$
Some P is not M.	1	1	1	1	0	0	0
Some M is not S.	2	1	1	0	0	0	1
∴ Some S is not P.	3	1	0	1	1	0	0
	4	1	0	0	0	0	1
$(\exists x)(Px \wedge \sim Mx)$	5	0	1	1	0	1	0
$(\exists x)(Mx \wedge \sim Sx)$	6	0	1	0	0	1	0
∴ $(\exists x)(Sx \wedge \sim Px)$	7	0	0	1	1	0	0
	8	0	0	0	0	0	0