

Philosophy 225
Spring 2012
HW #1 Possible Answers

1)

	(a) Formula?	(b) Sentence ?	(c) A,G,M,N	(d) Free x?	(e) Bound x?
1	Y	N	N	Y	N
2	Y	Y	G	N	Y
3	Y	Y	A	N	N
4	Y	Y	G	N	Y
5	N	N	N	N	N
6	Y	Y	M	N	Y
7	N	N	N	N	N
8	Y	Y	M	N	Y
9	Y	N	N	Y	Y
10	Y	Y	G	N	Y
11	Y	Y	M	N	N
12	Y	Y	M	N	Y
13	Y	N	N	Y	N
14	N	N	N	N	N

2) See other sheet

PHIL 225 - SYMBOLIC LOGIC

HW#1 - POSSIBLE ANSWERS

2a) a) $(\neg P_{a_2 a_3 a_7}^3 \leftrightarrow (\neg (E_{a_6}^1 \rightarrow (\neg (I_{a_4 a_5}^2 \vee S_{a_4 a_5 a_5}^3)) \wedge \neg G_{a_6 a_{29}}^2)))$

Truth values: $\neg P_{a_2 a_3 a_7}^3$ is T, $\neg (E_{a_6}^1 \rightarrow (\neg (I_{a_4 a_5}^2 \vee S_{a_4 a_5 a_5}^3)) \wedge \neg G_{a_6 a_{29}}^2))$ is F. The entire expression is F.

b) $(G_{a_4 a_7}^2 \wedge (P_{a_2 a_2 a_5}^3 \leftrightarrow \neg (S_{a_2 a_6 a_8}^3 \rightarrow \neg E_{a_7}^1)))$

Truth values: $G_{a_4 a_7}^2$ is F, $(P_{a_2 a_2 a_5}^3 \leftrightarrow \neg (S_{a_2 a_6 a_8}^3 \rightarrow \neg E_{a_7}^1))$ is F. The entire expression is F.

c) T

d) T (assign 2 to 'x')

e) T

f) F

g) F (the only value for 'x' that matters is 19)

(OVER $\rightarrow$)

