

1. Write a truth table for the following propositions.

$$(a \Rightarrow (b \Rightarrow c))$$

$$((a \wedge b) \vee (a \wedge c))$$

A	B	C	$(a \Rightarrow (b \Rightarrow c))$	$((a \wedge b) \vee (a \wedge c))$
T	T	T	T	T
T	T	F	F	T
T	F	T	T	T
T	F	F	T	F
F	T	T	T	F
F	T	F	T	F
F	F	T	T	F
F	F	F	T	F

2. Which of the following are fully parenthesized propositions? (Write yes or no in the blank.)

a. yes x

b. y $(x \vee B)$

c. n $a + b$

d. n $a \wedge b$

e. n $(a \wedge b(\wedge c))$

f. y $((a \vee b) \Rightarrow c)$

g. n $(a \vee b \vee c)$

h. n $(a = b) \vee c$

i. y $((\neg a) \wedge (\neg b))$

j. y $(a = (a \Rightarrow (a \vee (a \wedge (\neg a))))))$