



* could be argued that g. is just F because
santa fits the vibe perhaps

- * Like making the opposite

- c. Two "Things" happening at the same time. Both must be true for conjunction to be True.

"It is raining and the grass is wet"

$A \equiv$ "It is raining"

$B \equiv$ "The grass is wet"

$A \wedge B$

- d. Either one "Thing" is happening or both "Things" are happening. True if either proposition is True.

"The sun is out and/or it is hot"

$A \equiv$ "The sun is out"

$B \equiv$ "It is hot"

$A \vee B$

- e. Like cause and effect. One proposition implies the other.

"If I am in Los Angeles, then I am in California"

$A \equiv$ "In Los Angeles"

$B \equiv$ "In California"

$A \rightarrow B$

Q4 a. \perp

b. \perp

c. F

d. T

e. \perp

f. T

g. L

h. L

i. F

Q5	A	B	$A \vee B$	$A \wedge B$	$\neg(A \vee B)$	$\neg(A \wedge B)$	$\neg A$	$\neg B$	$\neg A \vee \neg B$	$\neg A \wedge \neg B$
	T	T	T	T	F	F	F	F	F	F
	T	F	T	F	F	T	F	T	T	F
	F	T	T	F	F	T	T	F	T	F
	F	F	F	F	T	T	T	T	T	T

$$(AB)' = A'B' \equiv \neg A + \neg B$$

$$(A+B)' = A'B' \equiv \neg A \cdot \neg B$$

DeMorgan's Law

Q6 a. positive information is a description of the world that is affirmative as in it states something and removes ambiguity
"The weather is clear". Clearly states a fact.

b. negative information is a description of the world that is ambiguous.
"This park does not have 23 trees". Well how many does it have?
States what is not true

Q7 a. "If housing prices are low, then I like the cold"

b. "If it is a nice day today, then there is no way today is Friday and housing prices are low"

c. "It is Summer equals it is Winter"

d. "Homework is due equals there is a way today is Friday"

e. "It is a nice day today and there is no way today is Friday is equal to homework is not due and it is summer"

sounds better w/ "is another way of saying"

Q8 a. It is beneficial because everyone has their own reality so we can only evaluate what we can. This leads us to "absurdity" which departs from the classical bounds of being strictly true or false.

b. It is beneficial for intuitionistic logic to distinguish between positive and negative information because negative information is what creates ambiguity and absurdity, which is a core construct of this form of logic. Being able to distinguish positive information means we can assign something w/ a basic proposition like True or False

c. Classical logic as the "Logic of God" makes sense because there is no "absurdity" so everything is either true/false and "God" knows all because he is omniscient. Intuitionistic logic as the "Logic of People" makes sense because everyone has their own reality which introduces absurdity because people can assign different propositions to the same situation due to their differing realities.

Q9. "Peanut butter tastes good"

For me: I like peanut butter so this is True

For someone else: They may not like peanut butter so this is False

For someone else: They might be allergic to nuts so this would be Absurd for them to answer