Problem 2

a) $a \wedge b = \neg(a \rightarrow \neg b)$

a	b	$\neg b$	$a \rightarrow \neg b$	$\neg(a \rightarrow \neg b)$	$a \wedge b$
0	0	1	1	0	0
0	1	0	1	0	0
1	0	1	1	0	0
1	1	0	0	1	1

Based on the truth table, $a \wedge b$ is logically equivalent to $\neg(a \rightarrow \neg b)$ as they have the same outputs.

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

$= \neg((a \wedge b) \rightarrow \neg c)$

$= \neg(\neg(a \rightarrow \neg b) \rightarrow \neg c)$