CMSC -471 - Midterm Extra Credit

1. Resolution Proof

pt 1

a) If it is a pleasant day (a), you will go out (b)

b) If you go out (b), you are happy (c)

c) you are not happy (~c)

a) $a \rightarrow b$

b) $b \rightarrow c$

c) $\sim c$

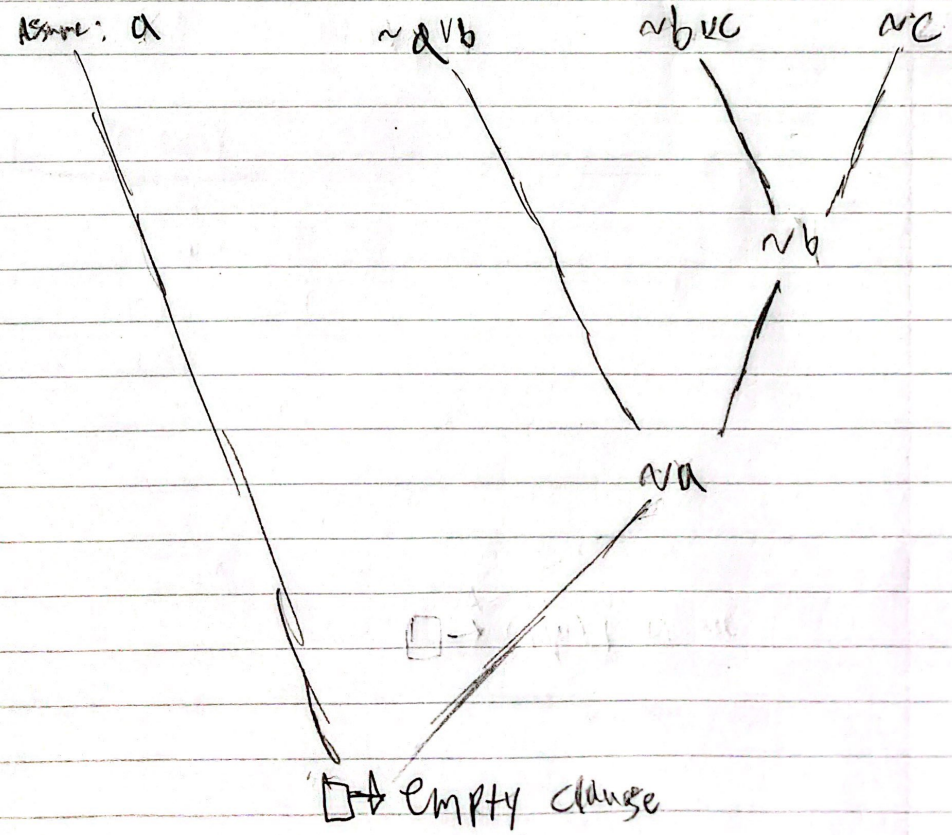
pt 2

a) $\sim a \vee b$

b) $\sim b \vee c$

c) $\sim c$

pt. 3



2. Problem solving as search

Pt. 1

Path: S → B → G

Pt. 2

cost: 7

Pt. 3

	Expansion	f(n)
	{S(7)}	{7}
S	{A(4), G(0), B(4), C(6)}	{8, 10, 7, 8}
B	{G(0), A(4), G(0), C(6)}	{4, 8, 10, 8}
G	{A(4), G(0), C(6)}	{8, 10, 8}

Pt. 4

	g(n)	h(n)
S: 7	0	7
A: 8	4	4
B: 7	3	4
G: 10	10	0
C: 8	2	6

Pt. 5

Yes, h is admissable b/c the h(n) value is always ≤ to the actual cost