hw6a

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Question one

- (a) m5, m7, m3 satisfy
- (b) every vowel is lowercase
- (c) m1, m2, m5, m6, m7
- (d) there is a lowercase vowel.
- (e) m7
- (f) all letters are lowercase vowels.
- (g) a model satisfying this would be M = A B C z
- (h) there exists a letter in the first half of the alphabet, aswell as a letter that is lowercase.
- (i) there is no formula to satisfy this, because the two formulas are logically equivalent.
- (j) all of the above formulas satisfy

Question two

- (a) $\forall x(F(x) \rightarrow V(x))$
- (b) $\exists x(L(x) \wedge F(x))$
- (c) $\forall x L(x) \vee \forall x F(x)$
- (d) $\forall x(L(x) \rightarrow (V(x) \vee F(x)))$