CMSC 451, SUMMER SESSION II 2002, HOMEWORK #3

Due: August 6, 2002 in class.

1) [50%] Using the pumping lemma for context-free languages, prove that the language
\{a^m b^{m^2} \mid m \text{ is a non negative integer}\} is not context-free.

2) [50%] Using the pumping lemma for context-free languages, prove that the language
\{0^k c^{3k} 1^k \mid k \text{ is a non negative integer}\}
is not context-free.