MA 330 ASSIGNMENT # 8

Answers to problems may be handwritten.

(1) Show that 28 and 48 are not an amicable pair of numbers.
(2) Prove that Thabit's construction of amicable pairs of numbers is valid.
(3) Show that any number of the form $4k + 3$ (where k is a whole number) is not a sum of two squares. (Hint: suppose that $4k + 3 = a^2 + b^2$, and consider what happens when a is odd or even, and when b is odd or even.)