

**FOR STUDENTS ONLY: 100 DHS AWARD FOR THE FIRST
STUDENT SOLUTION**

AYMAN BADAWI

E-MAIL your solution to abadawi@aus.edu, OR SLIDE IT UNDER MY DOOR NAB 262

QUESTION 1. *Let a, b be positive integers (whole numbers) such that 49 is a factor (divisor) of $a^2 + b^2$. Prove that 7 is a factor of a and 7 is a factor of b .*

DEPARTMENT OF MATHEMATICS & STATISTICS, AMERICAN UNIVERSITY OF SHARJAH, P.O. BOX
26666, SHARJAH, UNITED ARAB EMIRATES

E-mail address: abadawi@aus.edu, www.ayman-badawi.com