

QUIZ NUMBER FOUR MTH213 SPRING007

AYMAN BADAWI

Name \_\_\_\_\_, Id. Num. \_\_\_\_\_, Score  $\overline{15}$

**QUESTION 1.** Let  $a = 3^2 \cdot 8^2 \cdot 27^3 \cdot 5^2 \cdot 21^2$  and  $b = 7^3 \cdot 22^2 \cdot 35^3 \cdot 11^2 \cdot 19^3$ .

Find the  $\gcd(a, b)$ .

Find the  $\text{lcm}(a, b)$ .

Find  $307 \pmod{122}$ .

Find  $-307 \pmod{300}$ .

Convert  $(142)_5$  to its equivalent number in base 7.

DEPARTMENT OF MATHEMATICS & STATISTICS, AMERICAN UNIVERSITY OF SHARJAH, P.O. BOX  
26666, SHARJAH, UNITED ARAB EMIRATES  
E-mail address: [abadawi@aus.edu](mailto:abadawi@aus.edu), [www.ayman-badawi.com](http://www.ayman-badawi.com)