Name: _____ Student ID: _____ Section: _____

Instructions. Grading is based on method. SHOW ALL WORK.

Please email your solutions to hensh@msu.edu by 12:30PM on Friday (2024-07-04). Please use the subject line: **Math 481 - Quiz 02** and make sure that your name appears on your solution.

1. (8 points) Let a, b, c be distinct prime numbers and let $n = ab^2c^3$. Excluding $1 = a^0b^0c^0$, how many positive integer divisors does n have.

2. (12 points) How many 5 or 6-letter words can be created from the multiset $M = \left\{\left\{a, b^2, c^3\right\}\right\}$? For example, it is impossible to create a 5-letter word from M using only one c.