

Math 220 – Homework 4 (HNR)

Due Thursday 9/27 at the beginning of class

Total points: 150 (Problems marked by * will count toward writing portion.)

PART A*

Problems from the textbook:

problem	3.6	3.16	3.28	3.50	3.52	3.53	4.2	4.5	4.73	5.2	5.4	5.6
points	10	10	10	10	10	10	10	10	10	5	5	10

PART B*

- [40 points] Prove or disprove the following statements:
 - For all positive integers x, y, z , $x^{y^z} = (x^y)^z$.
 - For every integer n , if n is divisible by 2 and n is divisible by 6, then n is divisible by 12.
 - For all integers a, b , and c , if $a|(b + c)$, then $a|b$ or $a|c$.
 - Let $n \in \mathbb{Z}$. The integer $n^2 + 2n - 2019$ is odd for some odd n .