

Quantitative Reasoning 28: The Magic of Numbers

Homework 9

Assigned on February 25

Due at 5:00 p.m. February 28

Please submit problem sets to the boxes outside the Math Department's main office, on the third floor of the Science Center (Room 325).

Reading:

Gross-Harris, Chapter 8

Problems:

Please explain your reasoning and show your work.

1. For the following pairs of numbers, compute the greatest common divisor:
 - (a) 18 and 32;
 - (b) 25 and 40;
 - (c) 27 and 36.
2. For each of the pairs in Problem 1, compute the least common multiple. What is the product of the greatest common divisor and the least common multiple? How does this compare to the product of the two numbers?
3. Write down all of the common divisors of 120 and 96. How are these common divisors related to the *greatest* common divisor of these two numbers?