Cheenta - Filix Math Olympiad Program

Starter Module

Day 6 - Homework problems

(Try these before coming to **next** class)

Problem 1

Give a logical sequence of reasons to show that if the number of divisors of a number is odd then that number must be a perfect square.

Problem 2

Statement 1: The number of divisors of 4 is _____

Statement 2: The number of divisors of 9 is _____

Statement 3: The number of divisors of 4 * 9 is _____

Can you see any relation between statement 3 and statement 1, 2? Please explain any pattern that you observe.

Problem 3

Explain how the divisors of a number can be paired up. How does that affect the parity of the number of divisors?