

Marin Math Circle – Elementary Group
February 1, 2012

Class discussion:

1. Can you find 4 integer numbers such that the sum and the product of these numbers are both odd?
We proved it to be impossible:
 - a. In order for the product to be odd, all the factors should be odd.
 - b. If all the summands in the sum are odd, the sum is even.

2. We discussed previous HW: How many zeroes are at the end of $125!$? We found 31 zeros:
 - a. $100!$ Has 24 zeroes (discussed previously)
 - b. 105, 110, 115, 120 gives us 4 zeroes.
 - c. 125 gives us 3 zeroes, since $125 = 5 \times 5 \times 5 = 5^3$

3. What is a circle? A special point is called the center. A line that has all its points on the same distance from the center is called the circle. The distance is called the radius.
Into how many parts 2 circles cut the plane?

Homework:

- Into how many parts 3 circles cut the plane?
How many 4-digit, 5-digit, 6-digit palindromes are there?
(previous HW)
- 2 corners on one diagonal of a 4×4 checkerboard are cut out. Can one cover this board by 1×2 dominoes? (previous HW)