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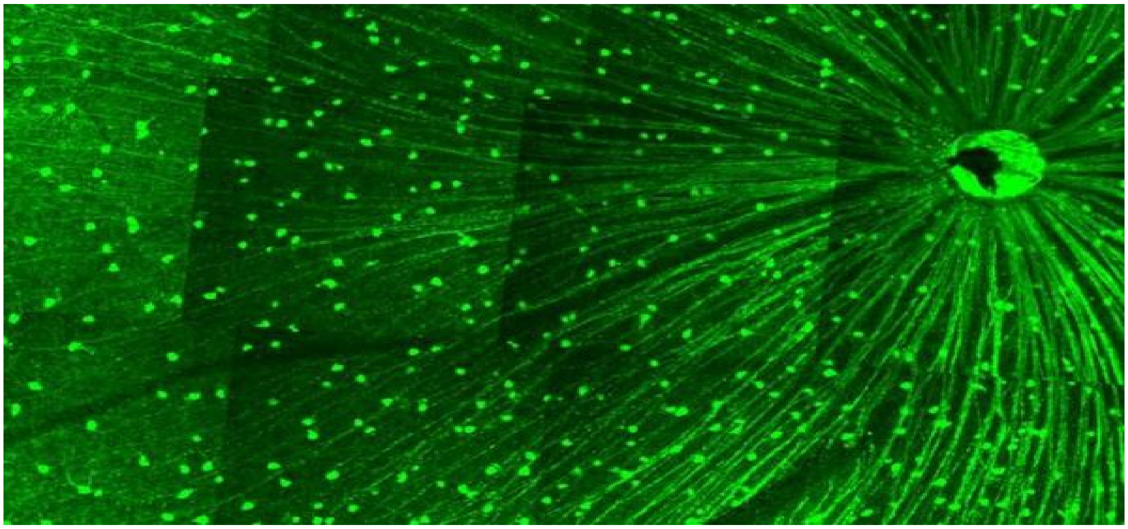

2^{2019} has "m" digits. 5^{2019} has "n" digits. Find:

$$\Omega = m + n$$

Proposed by Alpaslan Ceran-Turkey

Solution 1 by Khaled Abd Imouti-Damascus-Syria; Solution 2 by Tran Hong-Dong Thap-Vietnam

Solution 1 by Khaled Abd Imouti-Damascus-Syria

2^{2019} ***has "m" digits,*** 5^{2019} ***has "n" digits. Find:*** $\Omega = m + n$

$$2^{2019} \times 5^{2019} = (10)^{2019}$$

$$\Omega = m + n = 2020$$

Solution 2 by Tran Hong-Dong Thap-Vietnam

With $[*]$ ***- great integer function, we have:***

$$m = [\log 2^{2019}] + 1 = [2019 \cdot \log 2] + 1 = [2019 \cdot 0,3010] + 1 = 607 + 1 = 608$$

$$n = [\log 5^{2019}] + 1 = [2019 \log 5] + 1 = [2019 \cdot 0,6989] + 1 = 1411 + 1 = 1412$$

$$\Rightarrow m + n = 1412 + 608 = 2020.$$