01 If $x = 1^2 + 2^2 + 3^2 + ... + 2021^2$ and
$y = 1 \times 3 + 2 \times 4 + 3 \times 5 + ... + 2020 \times 2022$, then find the value of $(x - y)$.

Your solution here:

02 How many zero's end the number $2^{300} \times 4^{400} \times 5^{600}$?

Your solution here:

03 If x and y are prime numbers which satisfy $x^2 - 2y^2 = 1$. Solve for x & y.

Your solution here:

04 The operation ★ is defined for all non-zero numbers by $a \star b = \frac{a^2}{b}$. Determine [(1 ★ 2) ★ 3] – [1 ★ (2 ★ 3)].

Your solution here:

05 What are three unequal positive rational numbers a, b and c for which $a + b + c = \frac{1}{a+b+c}$?

Your solution here:

06 If $x + y = 2021$ and $\frac{1}{x}+\frac{1}{y} = 2021$, what is the value of xy ?

Your solution here:

07 What is the sum of the digits in the number equal to the product ?

$11 \times 101 \times 10001 \times 100000001 \times 1000000000000001$

Your solution here: