

## Hard – Discrete logarithm

Given this relation  $y = g^x \bmod p$

For information,  $p$  is a primer number of **522bits** length and  $g$  is the **prime** root of  $p$ .

For validating this challenge, you just have to **give** the **value** of  $x$  (also **522** bits wide).

$p =$

7863166752583943287208453249445887802885958578827520225154826621191353388988  
9089834842790219781140498382547017034244996889503617881401979066257963050084  
51719

$y =$

6289736695712027841545587266292164172813699099085672937550442102159309081155  
4675504114140881757298235981084520321374476086879296285970352783651527814948  
83808

$g =$

2862392356922936880157505726961027620297475166595443090826668842052108260396  
7550781800892950336771312867337849558543356725180179686221621532277788754586  
50593

Challenge Points : 300 pts

Happy coding.