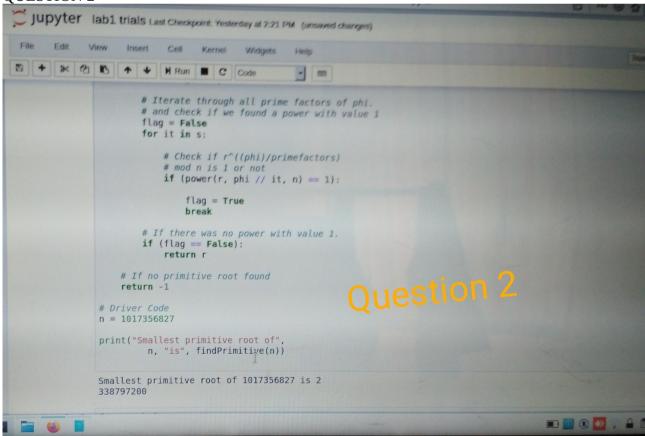
ANSWERS PROOFS

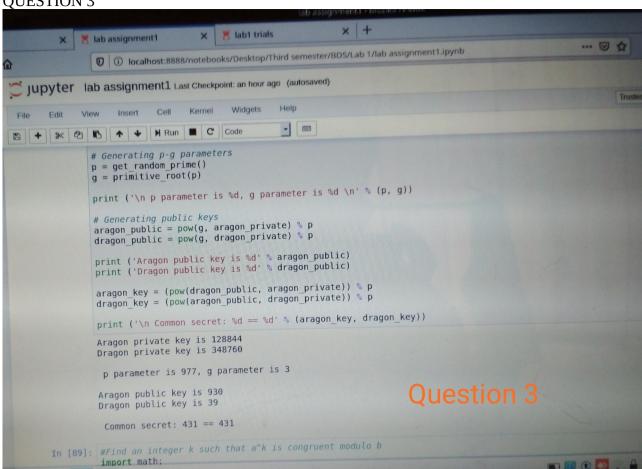
QUESTION 1

```
B ↑ ♦ N Run ■ C Code
    return True
def generate_prime_candidate(length):
    """ Generate an odd integer randomly
              length -- int -- the length of the number to generate, in bits
         return a integer
     # generate random bits
    p = getrandbits(length)
# apply a mask to set MSB and LSB to 1
p |= (1 << length - 1) | 1</pre>
     return p
    generate_prime_number(length=(10^20)):
      """ Generate a prime
         Args:
length -- int -- length of the prime to generate, in
         return a prime
     # keep generating while the primality test fail
while not is_prime(p, 10^20):
    p = generate_prime_candidate(length)
                                                                              Question 1
     return p
print(generate prime number())
1019563267
                                                                                                            ■ ® № · A 3:42 l
```

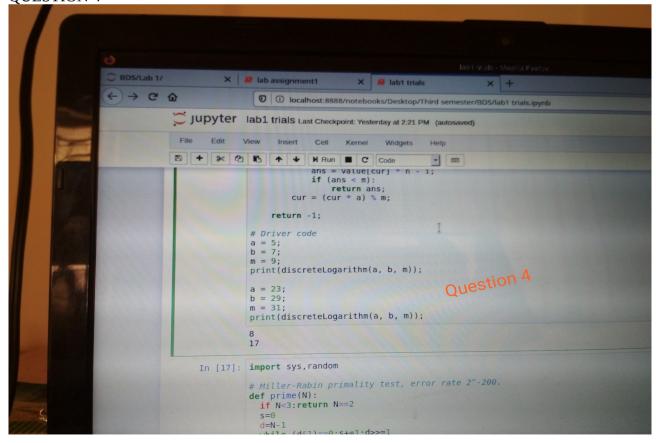
QUESTION 2



QUESTION 3



QUESTION 4



QUESTION 5

