

```
1: #!/usr/bin/python3
2: from pylab import *
3: from math import *
4: from numpy import *
5:
6: def p4():
7:     """2.12: Prime Numbers"""
8:     print("2.12 [Prime Numbers]:")
9:     max_prime = int(input("Max: "))
10:    primes = [2]
11:
12:    def is_prime(n):
13:        sqrt_n = sqrt(n)
14:        for p in primes:
15:            if p > sqrt_n:
16:                return True
17:            if n % p == 0:
18:                return False
19:    for n in range(3, max_prime, 2):
20:        if is_prime(n):
21:            primes.append(n)
22:    print(", ".join([str(x) for x in primes]))
23:
24: if __name__ == "__main__":
25:     p4()
```