**Prime factorization Homework Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1) Write down the first ten primes, the first two have been done for you:

2, 3, …

2) Find the prime factors of each number, then write each number as a product of its prime factors, firstly without using powers, then with. The first has been done as an example:

**36 15 72 70**

2 18

2 9

3 3

**36 =** 2x2x3x3 **15 = 72 = 70 =**

= 22x32 = = =

**45 81**

**45 =**   **81 =**

**= =**

3) Using the work in question 2, fill in this Venn diagram of prime factors of 45 & 81:

81

45

4) Hence, find the HCF and LCM of 45 & 81.