Prime Factorisation

EXERCISE 1.5

1 List all the prime numbers from 1 to 40 inclusive.
You should find that there are 12 such prime numbers altogether.

2 Use your result from question **1** to help answer these questions:
   a) How many primes are there between 20 and 40 inclusive?
   b) What is the next prime number above 31?
   c) Find two prime numbers that multiply together to make 403.
   d) Write 91 as a product of two prime factors.

3 Use the factor tree method to obtain the prime factorisation of:
   a) 80   b) 90   c) 450

4 Use the factor tree method to obtain the prime factorisation of:
   a) 36   b) 81   c) 144
   What do you notice about all three of your answers?

5 When 56 is written as a product of primes, the result is $2^a \times b$ where a and b are positive integers.
Find the values of a and b.