(1) A factor of a number is______________

(2) A prime number is a number that______________________

(3) The first 10 prime numbers are_______________________

(4) Draw a prime factor tree for the number 12.

(5) Express the following as a product of their prime factors:
   (a) 8  
   (b) 10  
   (c) 15  
   (d) 16  
   (e) 25  
   (f) 36  
   (g) 26  
   (h) 17 (why is this easy?)  
   (i) 36 and as a result 72  
   (j) 120  
   (k) 81  
   (l) 500

(6) Using your answer for 120 write down the product of prime factors of:
   (a) 240  
   (b) 120²  
   (c) 1200

(7) Which number can be expressed by the following product of prime factors?
   (a) 2² × 7  
   (b) 2³ × 3 × 5  
   (c) 2 × 3² × 7

(8) Explain why each of the following product of prime factors examples are wrong:
   (a) 18 = 2 × 9  
   (b) 64 = 2³ × 8

(9) Find the HCF of 36 and 120 using the product of prime factors for each number.