

- 1 Here is a set of numbers:  $\{-4, -1, 0, 3, 4, 6, 9, 15, 16, 19, 20\}$   
Which of these numbers are:
- (a) natural numbers?      (b) square numbers?      (c) negative integers?  
(d) prime numbers?      (e) multiples of two?      (f) factors of 80?
- 2 (a) List all the factors of 12.      (b) List all the factors of 24.      (c) Find the HCF of 12 and 24.
- 3 Find the HCF of 64 and 144.
- 4 List the first five multiples of:
- (a) 12      (b) 18      (c) 30      (d) 80
- 5 Find the LCM of 24 and 36.
- 6 List all the prime numbers from 0 to 40.
- 7 (a) Use a factor tree to express 400 as a product of prime factors.  
(b) Use the division method to express 1080 as a product of prime factors.  
(c) Use your answers to find:
- (i) the LCM of 400 and 1080      (ii) the HCF of 400 and 1080  
(iii)  $\sqrt{400}$       (iv) whether 1080 is a cube number; how can you tell?
- 8 Calculate:
- (a)  $26^2$       (b)  $43^3$
- 9 What is the smallest number greater than 100 that is:
- (a) divisible by two?      (b) divisible by ten?      (c) divisible by four?
- 10 At noon one day the outside temperature is  $4^\circ\text{C}$ . By midnight the temperature is 8 degrees lower.  
What temperature is it at midnight?