Exercise 3.1

Choose the correct answer from the given four options:

Question 13:

The father's age is six times his son's age. Four years hence, the age of the father will be four times his son's age. The present ages, in years, of the son and the father are, respectively

(A) 4 and 24 (B) 5 and 30

(C) 6 and 36 (D) 3 and 24

Answer 13:

(C) 6 and 36

Solution:

Let the father's age = a years

Let the son's age = b years

As the father's age is six times his son's age, so we have

$a = 6b$ …(i)

After 4 years

The father's age = $a + 4$ years

The son's age = $b + 4$ years

and four years hence, the age of the father will be four times his son's age, so we have

$a + 4 = 4(b + 4)$

or $a - 4b = 12$ …(ii)

Putting the value of a from equation (i) into equation (ii), we get

$6b - 4b = 12$

So, $2b = 12$ and $b = 6$

Putting the value of b in equation (i), we get

$a = 6 \times 6$ or $a = 36$.

Hence, the option (C) is correct.