The sum of the squares of three numbers is 138, while the sum of their products taken two at a time is 131. Their sum is:

A. 20

B. 30
C. 40
D. None of these

Option <u>A. 20</u> is the right answer

Aptitude Questions by CSS MCQs

Let suppose *The sum of the squares of three numbers is 138 i.e*

$a^2 + b^2 + c^2 = 138$

And, *the sum of their products taken two at a time is 131 i.e*

$(ab + bc + ca) = 131$

Now, as we know that

$(a + b + c)^2 = \underline{a^2 + b^2 + c^2} + 2\underline{(ab + bc + ca)}$

By putting the values, we get

$(a + b + c)^2 = \underline{138} + 2 \times \underline{131}$

$(a + b + c)^2 = 400$

The sum of the squares of three numbers is 138, while the sum of their products taken two at a time is 131. Their sum is:

By taking under root on both sides, we get

$\sqrt{(a + b + c)^2} = \sqrt{400}$

(a + b + c) = 20

Hence, if the sum of the squares of **three numbers is 138**, while the sum of their **products taken two at a time is 131**. Thenm their sum is 20 as proved above.

which is our right answer:)

837