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 A. 20 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

$(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$

By putting the values, we get

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

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:

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

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:)

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