Answer to Question #84738 – Math – Algebra

Let us assume that three three consecutive odd integers are $n, (n+2)$ and $(n+4)$

Therefore, the given condition is as follows

$$n + (n+2) + (n+4) = (n+4)^2 - 60$$
$$3n + 6 = n^2 + 16 + 8n - 60$$
$$n^2 + 16 + 8n - 60 - 3n - 6 = 0$$
$$n^2 + 5n - 50 = 0$$
$$n^2 + 10n - 5n - 50 = 0$$
$$n(n+10) - 5(n+10) = 0$$
$$(n+10)(n-5) = 0$$

$$\Rightarrow n - 5 = 0 \text{ or } n + 10 = 0$$
$$\Rightarrow n = 5 \text{ or } n = -10$$

Hence,

The first integer is 5.

n+2=5+2=7 : The second integer is 7.

n+4=5+4=9 : The third integer is 9.

CHECK:

$$5 + 7 + 9 = (9)^2 - 60$$
$$21 = 81 - 60$$
$$21 = 21$$