There are two things one can mean by the word "Integral".

> (A) **Definite Integral**
>
> - $\int_a^b f(x)dx :=$ limit of Riemann sums
> $$= \text{"area under the curve"}$$
>
> (B) **Indefinite Integral**
>
> - $\int f(x)dx := F(x) + c$, where $F'(x) = f(x)$
>   i.e. a "general anti-derivative" of $f(x)$

These two notions are different a priori.
The fundamental theorem of calculus says they happen to be the same.

Theorem (F.T.C.): (A) $\iff$ (B)

What this means is that knowing how to find one of the two items always enables you to find the other:

(A) $\Rightarrow$ (B): $F(x) = \int_a^x f(t)dt$ is an anti-derivative for $f(x)$.

(B) $\Rightarrow$ (A): $\int_a^b f(x)dx = F(b) - F(a)$, where $F(x)$ is an anti-derivative of $f(x)$.

Notice that these two statements are the content of FTC parts I & II.

So the FTC says exactly that the two notions of Integral carry the SAME information.