

**Answer on Question #45744 – Math – Integral Calculus**

Determine  $I = \int 2 \cos x dx$ , given that  $I = 7$  when  $x = 2\pi$ .

**Solution**

$$I = \int 2 \cos x dx = 2 \int \cos x dx = 2 \sin x + c$$

$$I(2\pi) = 2 \sin(2\pi) + c = 0 + c = 7 \Rightarrow I = 2 \sin x + 7$$

**Answer:**  $I = 2 \sin x + 7$