

## Answer on Question #45743 – Math – Integral Calculus

Determine  $I = \int 5dx$ , given that  $I = 16$  when  $x = 2$ .

### **Solution.**

At first, we will find the indefinite integral:

$$I = \int 5dx = 5 \int dx = 5x + C.$$

We have condition that  $I = 16$ , when  $x = 2$ . Hence, we can define constant  $C$ :

$$16 = 5 \cdot 2 + C, \text{ hence } C = 16 - 10 = 6.$$

**Answer:**

$$I = 5x + 6.$$