

Chapter 7 / Example 6

Evaluating definite integrals

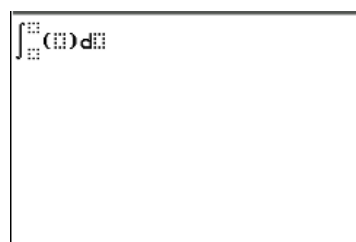
Evaluate the definite integrals.

a $\int_0^1 (3x^2 - 4x + 7) dx$ **b** $\int_0^\pi \cos \frac{x}{3} dx$ **c** $\int_{-1}^0 5(1-2x)^3 du$

In the home screen press $\boxed{\text{2ND}} \boxed{\text{F2}}$ [f2] 4:fnInt(.

You will see an integral template.

Older models of the TI-84 that use Classic display may not have the ability to show MathPrint and will show fnInt(instead. It may be possible to change between Classic and MathPrint display using $\boxed{\text{MODE}}$.

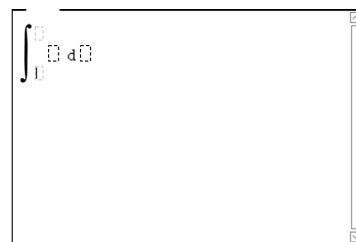


There are four fields to complete in the template: one for each of the limits, the function you are integrating and the variable you are integrating with respect to.

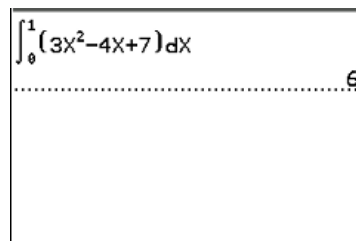
Enter $3x^2 - 4x + 7$ (there is no need to enter the parentheses), the limits 0 and 1 and the variable x .

Use the $\boxed{\text{right arrow}}$ $\boxed{\text{left arrow}}$ $\boxed{\text{up arrow}}$ $\boxed{\text{down arrow}}$ keys to navigate the template.

Press $\boxed{\text{enter}}$.



$\int_0^1 (3x^2 - 4x + 7) dx = 6.$

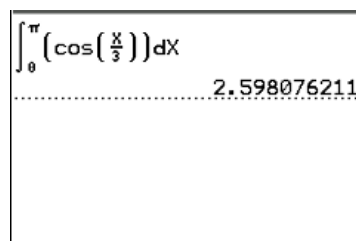


Press $\boxed{\text{2ND}} \boxed{\text{F2}}$ [f2] 4:fnInt(again.

Enter $\cos\left(\frac{x}{3}\right)$ using the fraction template: $\boxed{\text{2ND}} \boxed{\text{F1}}$ 1:n/d the limits 0 and π and the variable x .

Press $\boxed{\text{enter}}$ [format]

$\int_0^\pi \cos \frac{x}{3} dx \approx 2.60$



Chapter 7 / **Example 6**

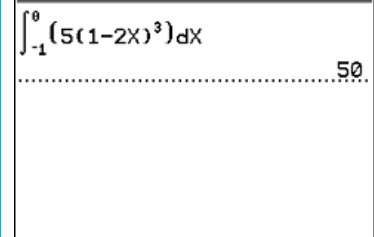
Evaluating definite integrals

Press $\boxed{\text{X}\boxed{\text{Y}}\boxed{\text{X}}\boxed{\text{X}}}$ [f2] 4:fnInt(again.

Enter $5(1-2x)^3$, the limits -1 and 0 and the variable x .

Press $\boxed{\text{enter}}$ [format]

$$\int_{-1}^0 5(1-2x)^3 dx = 50$$



$$\int_{-1}^0 (5(1-2x)^3) dx = 50$$