

Checklist

What you should know

By the end of this subtopic you should be able to:

- find the integral of a function using the following standard integrals:
 - $\int x^n dx = \frac{x^{n+1}}{n+1} + C, n \neq -1$
 - $\int (ax+b)^n dx = \frac{(ax+b)^{n+1}}{a(n+1)} + C, n \neq -1$
 - $\int \frac{1}{x} dx = \ln x + C$
 - $\int \frac{1}{ax+b} dx = \frac{1}{a} \ln |ax+b| + C$
 - $\int e^x dx = e^x + C$
 - $\int e^{ax+b} dx = \frac{1}{a} e^{ax+b} + C$
 - $\int \sin x dx = -\cos x + C$
 - $\int \sin(ax+b) dx = \frac{-\cos(ax+b)}{a} + C$
 - $\int \cos x dx = \sin x + C$
 - $\int \cos(ax+b) dx = \frac{\sin(ax+b)}{a} + C$
- find indefinite and definite integrals of functions by inspection and substitution.

