

Integration Exercises - Part 1 (1 page; 7/11/17)

Some of these integrals can be worked out by different methods.

$$(1) \int \sin x \cos x \, dx$$

$$(2) \int \frac{\ln x}{x} \, dx$$

$$(3) \int \frac{x+1}{x-1} \, dx$$

$$(4) \int x(2x - 1)^7 \, dx$$

$$(5) \int \frac{x^2}{x+1} \, dx$$

$$(6) \int \frac{x}{(1+x)^{\frac{1}{2}}} \, dx$$

$$(7) \int x(x + 1)^{\frac{3}{2}} \, dx$$

$$(8) \int \frac{1-x}{x+1} \, dx$$

$$(9) \int x\sqrt{1-x} \, dx$$

$$(10) \int \tan x \, dx$$

$$(11) \int \ln x \, dx$$

$$(12) \int x\sqrt{x^2 - 1} \, dx$$

$$(13) \int x^7 \ln x \, dx$$

$$(14) \int \sin x e^x \, dx$$

$$(15) \int \cos x \sqrt{\sin x} \, dx$$

$$(16) \int \sin^2 x \, dx$$