

Integration

$$\textcircled{1} \int x^2 e^{-\frac{1}{2}x} dx$$

$$\textcircled{2} \int \frac{1}{2} x^3 \ln x dx$$

$$\textcircled{3} \int x^2 \sin 3x dx$$

$$\textcircled{4} \int x \sec x \tan x dx$$

$$\textcircled{5} \int_0^1 4x e^{3x} dx$$

$$\textcircled{6} \int_0^{\pi/2} x \sin^2 x dx$$

$$\textcircled{7} \int \frac{x}{x^2-9} dx$$

$$\textcircled{8} \int (\sin x + 2 \cos x)^2 dx$$

$$\textcircled{9} \int \sec^2 x \tan x \sqrt{1+\tan x} dx$$

(use $u = \sqrt{1+\tan x}$)

$$\textcircled{10} \int \frac{2x^2+5x-1}{x^3+x^2-2x} dx$$