

# INTEGRATION BY SUBSTITUTION

①  $\int 4x(2x-1)^4 dx$        $u=2x-1$

②  $\int \frac{4x}{6x^2-1} dx$        $u=6x^2-1$

③  $\int \frac{4x^2}{2x-1} dx$        $u=2x-1$

④  $\int 3x(x^2+1)^{\frac{1}{2}} dx$        $u=x^2+1$

⑤  $\int x(x^2-1)^{\frac{5}{2}} dx$        $u=x^2-1$

⑥  $\int \frac{6x}{\sqrt{2x+3}} dx$

⑦  $\int \frac{x}{\sqrt{x-1}} dx$

⑧  $\int \frac{4x+1}{2x-5} dx$