

## NEDOLOČENI INTEGRAL

1. Izračunaj naslednje nedoločene integrale:

- (a)  $\int (\frac{x^2}{2} + \frac{x^7}{6} + \frac{1}{\sqrt[5]{x^{12}}} - x^{-7} + x^{-\pi}) dx,$
- (b)  $\int (\cos x - \frac{1}{\sin^2 x} + \frac{4}{1+x^2} - \frac{2}{\sqrt{1+x^2}}) dx,$
- (c)  $\int e^{3x} dx,$
- (d)  $\int a^{2x+7} dx.$

2. Izračunaj naslednje nedoločene integrale:

- (a)  $\int (x+1)^7 dx,$
- (b)  $\int \cos 2x dx,$
- (c)  $\int e^{2x} dx,$
- (d)  $\int \operatorname{tg}(2x) dx,$
- (e)  $\int \frac{dx}{x \ln^5 x},$
- (f)  $\int x \sqrt{1-x^2} dx,$
- (g)  $\int x \sin x^2 dx,$
- (h)  $\int \frac{\arctg x}{1+x^2} dx.$

3. Izračunaj naslednje nedoločene integrale:

- (a)  $\int x^5 \ln x dx,$
- (b)  $\int x \sin 2x dx,$
- (c)  $\int x^2 \cos x dx,$
- (d)  $\int x \sin(2x-1) dx,$
- (e)  $\int (2x+3) \cos x dx,$
- (f)  $\int x^2 \cos^2 x dx,$
- (g)  $\int x^3 \ln^3 x dx,$
- (h)  $\int x \ln(x^2+1) dx,$
- (i)  $\int x e^{2x} dx,$
- (j)  $\int (2x+3) e^x dx,$
- (k)  $\int (2x^2-7x+1) e^x dx,$
- (l)  $\int (3x^4-2x-1) e^{2x} dx,$
- (m)  $\int e^x \cos(2x) dx,$
- (n)  $\int e^{-x} \sin x dx,$
- (o)  $\int e^{2x} (\cos 2x - 2 \sin x) dx,$
- (p)  $\int x \arcsin x dx.$

4. Izračunaj naslednje nedoločene integrale:

- (a)  $\int \frac{1}{x^2-4} dx,$

(b)  $\int \frac{1}{x^3-5x^2+6x} dx,$

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

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

(e)  $\int \frac{4x^3-1}{x^2-1} dx,$

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

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

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

(i)  $\int \frac{x^2-2x+2}{x(x^2+1)} dx.$

5. Izračunaj naslednje nedoločene integrale:

(a)  $\int \cos^5 x \sin x dx,$

(b)  $\int \cos^2 x \sin^4 x dx,$

(c)  $\int \cos^4 x \sin^2 x dx,$

(d)  $\int \cos^{2013} x dx,$

(e)  $\int \sin^2 x \cos^5 x dx,$

(f)  $\int \sin^3 x \cos^5 x dx,$

(g)  $\int \sin^4 x dx,$

(h)  $\int \cos^8 x dx.$