

TUYỂN TẬP ĐỀ THI TÍCH PHÂN TRONG NHỮNG NĂM GẦN ĐÂY



Năm 2015:	$I = \int_0^1 (x-3).e^x dx$	ĐS: $4-3e$
KD - 2014:	$I = \int_0^{\frac{\pi}{4}} (x+1). \sin 2x dx$	ĐS: $\frac{3}{4}$
KB - 2014:	$I = \int_1^2 \frac{x^2+3x+1}{x^2+x} dx$	ĐS: $1+\ln 3$
KA - 2013:	$I = \int_1^2 \frac{x^2-1}{x^2} \ln x. dx$	ĐS: $\frac{5}{2} \ln 2 - \frac{3}{2}$
KB - 2013	$I = \int_0^1 x\sqrt{2-x^2}. dx$	ĐS: $\frac{2\sqrt{2}-1}{3}$
KD - 2013	$I = \int_0^1 \frac{(x+1)^2}{x^2+1} dx$	ĐS: $1+\ln 2$
KA - 2012	$I = \int_1^3 \frac{1+\ln(x+1)}{x^2} dx$	ĐS: $\frac{2}{3} + \ln 3 - \frac{2}{3} \ln 2$
KB - 2012	$I = \int_0^1 \frac{x^3}{x^4+3x^2+2} dx$	ĐS: $\ln 3 - \frac{3}{2} \ln 2$
KD - 2012	$I = \int_0^{\frac{\pi}{4}} x(1+\sin 2x) dx$	ĐS: $\frac{\pi^2}{32} + \frac{1}{4}$
KA - 2011	$I = \int_0^{\frac{\pi}{4}} \frac{x \sin x + (x+1) \cos x}{x \sin x + \cos x} dx;$	ĐS: $\frac{\pi}{4} + \ln \left(\frac{\pi\sqrt{2} + 4\sqrt{2}}{8} \right)$
KB - 2011	$I = \int_0^{\frac{\pi}{3}} \frac{1+x \sin x}{\cos^2 x} dx ;$	ĐS: $\sqrt{3} + \frac{2\pi}{3} - \ln(2+\sqrt{3})$
KD - 2011	$I = \int_0^4 \frac{4x-1}{\sqrt{2x+1}+2} dx ;$	ĐS: $5 \ln \frac{5}{3}$
CĐ- 2011	$I = \int_1^2 \frac{2x+1}{x(x+1)} dx ;$	ĐS:
KA-2010	$I = \int_0^1 \frac{x^2+e^x+2x^2e^x}{1+2e^x} dx$	ĐS: $\frac{1}{3} + \frac{1}{2} \ln \frac{1+2e}{3}$
KB-2010	$I = \int_1^e \frac{\ln x}{x(\ln x+2)^2} dx;$	ĐS: $\ln \frac{3}{2} - \frac{1}{3}$

KD-2010	$I = \int_1^e \left(2x - \frac{3}{x}\right) \ln x dx ;$	ĐS: $\frac{1}{2}e^2 - 1$
CĐ – 2010	$I = \int_0^1 \frac{2x-1}{x+1} dx ;$	ĐS:
KA – 2009	$I = \int_0^{\frac{\pi}{2}} (\cos^3 x - 1) \cos^2 x dx ;$	ĐS: $\frac{8}{15} - \frac{\pi}{4}$
KB – 2009	$I = \int_1^3 \frac{3 + \ln x}{(x+1)^2} dx ;$	ĐS: $\frac{3 - \ln 3}{4} + \ln \frac{3}{4} - \ln \frac{1}{2}$
KD – 2009	$I = \int_1^3 \frac{dx}{e^x - 1} ;$	ĐS: $\ln(e^3 - 1) - \ln(e - 1) - 2$
KA – 2008	$I = \int_0^{\frac{\pi}{6}} \frac{\tan^4 x}{\cos 2x} dx ;$	ĐS: $\frac{-10\sqrt{3}}{27} - \frac{1}{2} \ln(2 - \sqrt{3})$
KB – 2008	$I = \int_0^{\frac{\pi}{4}} \frac{\sin\left(x - \frac{\pi}{4}\right) dx}{\sin 2x + 2(1 + \sin x + \cos x)} ;$	ĐS: $\frac{1}{2\sqrt{2}} \left(\frac{1 - \sqrt{2}}{\sqrt{2} + 1} \right)$
KD – 2008	$I = \int_1^2 \frac{\ln x}{x^3} dx ;$	ĐS: $\frac{3 - 2 \ln 2}{16}$
KD – 2007	$I = \int_1^e x^3 \ln^2 x dx ;$	ĐS: $\frac{5e^4 - 1}{32}$
KA – 2006	$I = \int_0^{\frac{\pi}{2}} \frac{\sin 2x}{\sqrt{\cos^2 x + 4 \sin^2 x}} dx ;$	ĐS: $\frac{2}{3}$
KB – 2006	$I = \int_{\ln 3}^{\ln 5} \frac{dx}{e^x + 2e^{-x} - 3} ;$	ĐS: $\ln \frac{3}{2}$
KD – 2006	$I = \int_0^1 (x-2)e^{2x} dx ;$	ĐS: $\frac{5 - 3e^2}{2}$
KA – 2005	$I = \int_0^{\frac{\pi}{2}} \frac{\sin 2x + \sin x}{\sqrt{1 + 3 \cos x}} dx ;$	ĐS: $\frac{34}{27}$
KB – 2005	$I = \int_0^{\frac{\pi}{2}} \frac{\sin 2x \cdot \cos x}{1 + \cos x} dx ;$	ĐS: $2 \ln 2 - 1$
KD – 2005	$I = \int_0^{\frac{\pi}{2}} (e^{\sin x} + \cos x) \cos x dx ;$	ĐS: $e + \frac{\pi}{4} - 1$

KA – 2004	$I = \int_1^2 \frac{x}{1+\sqrt{x-1}} dx ;$	ĐS: $\frac{11}{3} - 4 \ln 2$: KB – 2004	$I = \int_0^e \frac{\sqrt{1+3 \ln x} \ln x}{x} dx ;$	ĐS: $\frac{116}{135}$
KD – 2004	$I = \int_2^3 \ln(x^2 - x) dx ;$	ĐS: $3 \ln 3 - 2$: KA – 2003	$I = \int_{\sqrt{5}}^{2\sqrt{3}} \frac{dx}{x\sqrt{x^2+4}} ;$	ĐS: $\frac{1}{4} \ln \frac{5}{3}$
KB – 2003	$I = \int_0^{\frac{\pi}{4}} \frac{1-2 \sin^2 x}{1+\sin 2x} dx ;$	ĐS: $\frac{1}{2} \ln 2$: KD – 2003	$I = \int_0^2 x^2 - x dx ;$	ĐS: 1
CĐ – 2007	$I = \int_{\frac{1}{2}}^1 \frac{1}{x^2} \left(1 + \frac{1}{x}\right)^{2007} dx$				