

Dio tablice izvoda

$$1) (c)' = 0;$$

$$3) (uv)' = u'v + v'u;$$

$$4) \left(\frac{u}{v}\right)' = \frac{u'v - v'u}{v^2};$$

$$4b) \left(\frac{c}{v}\right)' = -\frac{cv'}{v^2};$$

$$6) (\sin x)' = \cos x;$$

$$8) (\operatorname{tg} x)' = \sec^2 x;$$

$$2) (u + v - w)' = u' + v' - w';$$

$$3a) (cu)' = cu';$$

$$4a) \left(\frac{u}{c}\right)' = \frac{u'}{c};$$

$$5) (x^n)' = nx^{n-1};$$

$$7) (\cos x)' = -\sin x;$$

$$9) (\operatorname{ctg} x)' = -\operatorname{cosec}^2 x.$$

$$5) (u^n)' = nu^{n-1} \cdot u';$$

$$6) (\sin u)' = \cos u \cdot u';$$

$$7) (\cos u)' = -\sin u \cdot u';$$

$$8) (\operatorname{tg} u)' = \sec^2 u \cdot u';$$

$$9) (\operatorname{ctg} u)' = -\operatorname{cosec}^2 u \cdot u'.$$

$$10) (a^u)' = a^u \ln a \cdot u';$$

$$10a) (e^u)' = e^u u';$$

$$10b) (a^x)' = a^x \ln a;$$

$$10b) (e^x)' = e^x;$$

$$11) (\log u)' = \frac{u'}{u} \log e;$$

$$11a) (\ln u)' = \frac{u'}{u};$$

$$11b) (\log x)' = \frac{1}{x} \log e;$$

$$11b) (\ln x)' = \frac{1}{x}.$$

$$12) (\operatorname{arc} \sin u)' = \frac{u'}{\sqrt{1-u^2}};$$

$$13) (\operatorname{arc} \cos u)' = -\frac{u'}{\sqrt{1-u^2}};$$

$$14) (\operatorname{arc} \operatorname{tg} u)' = \frac{u'}{1+u^2};$$

$$15) (\operatorname{arc} \operatorname{ctg} u)' = -\frac{u'}{1+u^2};$$

$$12a) (\operatorname{arc} \sin x)' = \frac{1}{\sqrt{1-x^2}};$$

$$13a) (\operatorname{arc} \cos x)' = -\frac{1}{\sqrt{1-x^2}};$$

$$14a) (\operatorname{arc} \operatorname{tg} x)' = \frac{1}{1+x^2};$$

$$15a) (\operatorname{arc} \operatorname{ctg} x)' = -\frac{1}{1+x^2}.$$

Dio tablice integrala

$$1. \int u^a du = \frac{u^{a+1}}{a+1} + C, \quad a \neq -1.$$

$$2. \int u^{-1} du = \int \frac{du}{u} = \int \frac{u'}{u} dx = \\ = \ln |u| + C.$$

$$3. \int a^u du = \frac{a^u}{\ln a} + C; \int e^u du = \\ = e^u + C.$$

$$4. \int \sin u du = -\cos u + C.$$

$$5. \int \cos u du = \sin u + C.$$

$$6. \int \sec^2 u du = \operatorname{tg} u + C.$$

$$7. \int \operatorname{cosec}^2 u du = -\operatorname{ctg} u + C.$$

$$8. \int \frac{du}{u^2+a^2} = \frac{1}{a} \operatorname{arc} \operatorname{tg} \frac{u}{a} + C.$$

$$9. \int \frac{du}{u^2-a^2} = \frac{1}{2a} \ln \left| \frac{u-a}{u+a} \right| + C.$$

$$10. \int \frac{du}{\sqrt{a^2-u^2}} = \operatorname{arc} \sin \frac{u}{a} + C.$$

$$11. \int \frac{du}{\sqrt{u^2+a}} = \\ = \ln |u + \sqrt{u^2+a}| + C.$$