Za vežbu

1. $\int \frac{dx}{\sqrt{-3x^2+2x+1}}$;

   Rešenje: $\frac{\sqrt{3}}{3}\arcsin\frac{3x-1}{2}+c$.

2. $\int \frac{dx}{\sqrt{4x^2-12x+3}}$;

   Rešenje: $\frac{1}{2}\ln\left|x-\frac{3}{2}+\sqrt{x^2-3x+\frac{3}{4}}\right|+c$.

3. $\int \frac{dx}{\sqrt{1-x-3x^2}}$;

   Rešenje: $\frac{\sqrt{3}}{3}\arcsin\frac{6x+1}{\sqrt{13}}+c$.

4. $\int \frac{dx}{\sqrt{2x^2-3x+1}}$;

   Rešenje: $\frac{\sqrt{2}}{2}\ln\left|x-\frac{3}{4}+\sqrt{x^2-\frac{3}{2}x+\frac{1}{2}}\right|+c$.

5. $\int \frac{x+3}{\sqrt{x^2+2x+2}}\,dx$;

   Rešenje: $\sqrt{x^2+2x+2}+2\ln\left|x+1+\sqrt{x^2+2x+2}\right|+c$.

6. $\int \frac{3x-2}{\sqrt{5+4x-x^2}}\,dx$;

   Rešenje: $4\arcsin\frac{x-2}{3}-3\sqrt{5+4x-x^2}+c$.

7. $\int \frac{3x^3+5}{\sqrt{x^2+4}}\,dx$;

   Rešenje: $\left(x^2-8\right)\sqrt{x^2+4}+\frac{5}{2}\mathrm{arctg}\,\frac{x}{2}+c$.

8. $\int \frac{x^3-1}{\sqrt{x^2+1}}\,dx$;

   Rešenje: $\left(\frac{1}{3}x^2-\frac{2}{3}\right)\sqrt{x^2+1}-\ln\left|x+\sqrt{x^2+1}\right|+c$.

9. $\int \frac{x^2}{\sqrt{1-x-3x^2}}\,dx$

   Rešenje: $\left(\frac{1}{6}x^2-\frac{1}{12}\right)\sqrt{1-x-3x^2}+\frac{\sqrt{3}}{24}\arcsin\frac{6x+1}{\sqrt{13}}+c$.

10. $\int \frac{x^2+1}{\sqrt{x^2+x+1}}\,dx$

    Rešenje: $\left(\frac{1}{2}x^2-\frac{3}{4}\right)\sqrt{x^2+x+1}+\frac{7}{8}\ln\left|x+\frac{1}{2}+\sqrt{x^2+x+1}\right|+c$.

11. $\int \frac{x+2}{\sqrt{4x^2-12x+3}}\,dx$

    Rešenje: $\frac{1}{4}\sqrt{4x^2-12x+3}+\frac{7}{4}\ln\left|x-\frac{3}{2}+\sqrt{x^2-3x+\frac{3}{4}}\right|+c$.

12. $\int \frac{2x+5}{\sqrt{1-x-3x^2}}\,dx$;

    Rešenje: $-\frac{2}{3}\sqrt{1-x-3x^2}+\frac{14\sqrt{3}}{9}\arcsin\frac{6x+1}{\sqrt{13}}+c$.

13. $\int \frac{x+1}{\sqrt{2x^2-3x+1}}\,dx$;

    Rešenje: $\frac{1}{2}\sqrt{2x^2-3x+1}+\frac{7\sqrt{2}}{8}\ln\left|x-\frac{3}{4}+\sqrt{x^2-\frac{3}{2}x+\frac{1}{2}}\right|+c$.