Integració amb arcsin i arctag

- $\int \frac{4}{\sqrt{3\text{-}5x^2}}\cdot dx = \frac{4}{\sqrt{3}}\cdot\int \frac{1}{\sqrt{1\text{-}\frac{5}{3}(x^2)^2}}\cdot dx = \frac{4}{\sqrt{3}}\int \frac{1}{\sqrt{1\text{-}(\frac{\sqrt{5}}{\sqrt{3}}x^2)^2}}\cdot dx = \frac{4}{\sqrt{3}}\frac{\sqrt{3}}{2\sqrt{5}}\int \frac{\frac{\sqrt{5}}{\sqrt{3}}x}{\sqrt{1\text{-}(\frac{\sqrt{3}}{\sqrt{2}}x^2)^2}}\cdot dx = \frac{2}{\sqrt{5}}\cdot\arcsin(\frac{\sqrt{5}}{\sqrt{3}}x)+C.$
- $\int \frac{5x}{\sqrt{2\text{-}3x^4}}\cdot dx = \frac{5}{\sqrt{2}}\cdot\int \frac{x}{\sqrt{1\text{-}\frac{3}{2}(x^2)^2}}\cdot dx = \frac{5}{\sqrt{2}}\int \frac{x}{\sqrt{1\text{-}(\frac{\sqrt{3}}{\sqrt{2}}x^2)^2}}\cdot dx = \frac{5}{\sqrt{2}}\frac{\sqrt{2}}{2\sqrt{3}}\int \frac{\frac{2\sqrt{3}}{\sqrt{2}}x}{\sqrt{1\text{-}(\frac{\sqrt{3}}{\sqrt{2}}x^2)^2}}\cdot dx = \frac{2}{2\sqrt{3}}\cdot\arcsin(\frac{\sqrt{3}}{\sqrt{2}}x^2)+C.$
- $\int \frac{\frac{1}{x}}{\sqrt{2\text{-}\ln^2 x}}\cdot dx. = \frac{1}{\sqrt{2}}\int \frac{\frac{1}{x}}{\sqrt{1\text{-}\frac{1}{2}\ln^2 x}}\cdot dx = \frac{1}{\sqrt{2}}\int \frac{\frac{1}{x}}{\sqrt{1\text{-}(\frac{1}{\sqrt{2}}\ln x)^2}}\cdot dx = \frac{1}{\sqrt{2}}\sqrt{2}\int \frac{\frac{1}{\sqrt{2}}\frac{1}{x}}{\sqrt{1\text{-}(\frac{1}{\sqrt{2}}\ln x)^2}}\cdot dx = \arcsin(\frac{1}{\sqrt{2}}\ln x)+C.$
- $\int \frac{5}{10+2x^2}\cdot dx = 5\int \frac{1}{10\cdot(1+\frac{2x^2}{10})}dx = 5\cdot\frac{1}{10}\sqrt{\frac{10}{2}}\int \frac{\sqrt{\frac{2}{10}}}{(1+\frac{\sqrt{2}x}{\sqrt{10}})^2}dx = \frac{1}{2}\cdot\sqrt{5}\cdot\text{arctag}(\sqrt{\frac{10}{2}}\cdot x)+ C = \frac{1}{2}\cdot\sqrt{5}\cdot\text{arctag}\ (\sqrt{5}\cdot x)+C$
- $\int \frac{8x}{3+5x^4}\cdot dx = 8\int \frac{x}{3\cdot(1+\frac{5x^4}{3})}dx = \frac{8}{3}\sqrt{\frac{3}{5}}\int \frac{\sqrt{\frac{5}{3}}}{(1+\frac{\sqrt{5}x^2}{\sqrt{3}})^2}dx = \frac{8}{3}\sqrt{\frac{3}{5}}\cdot\text{arctag}(\sqrt{\frac{5}{3}}\cdot x^2)+ C.$
- $\int \frac{e^x}{4+e^{2x}}dx = \int \frac{e^x}{4(1+\frac{1}{4}e^{2x})}dx = \frac{1}{4}\int \frac{e^x}{1+\frac{1}{4}e^{2x}} = \frac{1}{4}2\int \frac{\frac{1}{2}e^x}{1+(\frac{1}{2}e^x)^2} = \frac{1}{2}\text{arctag}(\frac{1}{2}e^x)+C.$