1. $\int \dfrac{dx}{x^2\sqrt{9-x^2}}$

2. $\int \dfrac{dx}{\sqrt{x^2+4}}$

3. $\int \dfrac{dx}{(x^2+1)^{3/2}}$

4. $\int \dfrac{\sqrt{x^2-3}}{x}\,dx$

5. $\int \sqrt{1-x^2}\,dx$

Answers

1. $-\dfrac{1}{9}\left(\dfrac{\sqrt{9-x^2}}{x}\right)+C$

2. $\ln\left|\dfrac{\sqrt{x^2+4}}{2}+\dfrac{x}{2}\right|+C$

3. $\dfrac{x}{\sqrt{x^2+1}}+C$

4. $\sqrt{x^2-3}-\sqrt{3}\,\operatorname{arcsec}\left(\dfrac{x}{\sqrt{3}}\right)+C$

5. $\dfrac{1}{2}\arcsin x+\dfrac{1}{2}x\sqrt{1-x^2}+C$