Evaluate the integrals

1. $\int_{\sqrt{2}}^{2} \frac{\sqrt{x^2-1}}{x}\,dx$

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

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

4. $\int_{0}^{3} \frac{dx}{\sqrt{9-x^2}}$

5. $\int \frac{dx}{\sqrt{9x^2-25}}, \quad x > \frac{5}{3}$

6. $\int_{0}^{\sqrt{3}/2} \frac{x^2}{\left(1-x^2\right)^{3/2}}\,dx$

7. $\int_{0}^{\sqrt{3}/2} \frac{4}{9+4x^2}\,dx$

8. $\int \frac{\left(1-x^2\right)^{5/2}}{x^8}\,dx$

9. $\int_{1/12}^{1/4} \frac{dx}{\sqrt{x}\left(1+4x\right)}$

10. $\int \frac{e^{2x}}{\left(1+e^{4x}\right)^{3/2}}\,dx$