

1. Evaluate $\int \sin^4 x \, dx$

2. Evaluate $\int \cos^7 x \, dx$

3. Evaluate $\int_0^{\pi/2} \cos^{12} x \, dx$

4. Evaluate $\int_0^{\pi/2} \cos^{15} x \, dx$

5. Evaluate $\int \sqrt{9-4x^2} \, dx$

6. Evaluate $\int \frac{dx}{\sqrt{x^2-25}}$

7. Evaluate $\int \frac{dx}{x^2 \sqrt{x^2+36}}$

1. $\frac{3}{8}x - \frac{1}{4}\sin 2x + \frac{1}{32}\sin 4x + C$

2. $\sin x - \sin^3 x + \frac{3}{5}\sin^5 x - \frac{1}{7}\sin^7 x + C$

3. $\frac{231}{2^{11}}\pi$

4. $\frac{2^{11}}{6,435}$

5. $\frac{9}{4}\sin^{-1}\left(\frac{2x}{3}\right) + \frac{1}{2}x\sqrt{9-4x^2} + C$

6. $\ln\left|\frac{x}{5} + \frac{\sqrt{x^2-25}}{5}\right| + C$

7. $-\frac{\sqrt{x^2+36}}{36x} + C$