

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.

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

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