

1.  $\int \sin^2 \theta \cos^5 \theta \, d\theta$  (Chap 7 Review #15)

2.  $\int \tan^7 \theta \sec^3 \theta \, d\theta$  (Chap 7 Review #5)

3.  $\int_0^{\pi/2} \sin^2 x \cos^2 x \, dx$  (Section 7.2 #14)

4.  $\int \tan^2 x \, dx$  (Section 7.2 #23)

5.  $\int_0^{2\sqrt{3}} \frac{x^3}{\sqrt{16-x^2}} \, dx$  (Section 7.3 #4)

6.  $\int \frac{dx}{\sqrt{x^2+16}}$  (Section 7.3 #9)

7.  $\int \frac{dx}{x^2 \sqrt{1+x^2}}$  (Chap 7 Review #8)

8.  $\int \frac{\sqrt{x^2-1}}{x} \, dx$  (Chap 7 Review #11 modified)

9.  $\int_0^1 \frac{x^3 - 4x - 10}{x^2 - x - 6} \, dx$  (Section 7.4 #16)

10.  $\int \frac{1}{(x+5)^2(x-1)} \, dx$  (Section 7.4 #19)

11.  $\int \frac{10}{(x-1)(x^2+9)} dx$  (Section 7.4 #25)

12.  $\int \frac{x^3 + x^2 + 2x + 1}{(x^2+1)(x^2+2)} dx$  (Section 7.4 #27)

13.  $\int \frac{dx}{x^3+x}$  (Chap 7 Review #13)

14.  $\int \frac{10}{(x-1)(x^2+9)} dx$  (Section 7.4 #25)

15.  $\int_1^{\infty} \frac{1}{(2x+1)^3} dx$  (Chap 7 Review #41)

16.  $\int_{-\infty}^{\infty} \frac{x}{1+x^2} dx$  (Section 7.8 #11)

17.  $\int_0^1 \frac{1}{2-3x} dx$  (Chap 7 Review #46)

18.  $\int_1^9 \frac{1}{\sqrt[3]{x-9}} dx$  (Section 7.8 #30)

19.  $\int_{-\infty}^{\infty} \frac{x^2}{e^{-x^3}} dx$  (Section 7.8 #14)

20. Use the Comparison Theorem to determine that the integral  $\int_1^{\infty} \frac{\cos^2 x}{1+x^2} dx$  is convergent.  
(Section 7.8 #49)