

27.  $\int \frac{2e^x}{1 + e^x} dx$

29.  $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} dx$

31.  $\int \frac{e^{3x} + x^2}{(e^{3x} + x^3)^3} dx$

33.  $\int e^{2x}(e^{2x} + 1)^3 dx$

35.  $\int \frac{\ln 5x}{x} dx$

37.  $\int \frac{3}{x \ln x} dx$

39.  $\int \frac{\sqrt{\ln x}}{x} dx$

41.  $\int \left( xe^{x^2} - \frac{x}{x^2 + 2} \right) dx$

43.  $\int \frac{x + 1}{\sqrt{x} - 1} dx$

**Hint:** Let  $u = \sqrt{x} - 1$ .

45.  $\int x(x - 1)^5 dx$

**Hint:**  $u = x - 1$  implies  $x = u + 1$ .

46.  $\int \frac{t}{t + 1} dt$

**Hint:**  $\frac{t}{t + 1} = 1 - \frac{1}{t + 1}$

48.  $\int \frac{1 + \sqrt{x}}{1 - \sqrt{x}} dx$

**Hint:** Let  $u = 1 - \sqrt{x}$ .

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

**Hint:** Let  $u = x^2 + 1$ .

28.  $\int \frac{e^{2x}}{1 + e^{2x}} dx$

30.  $\int \frac{e^{-1/x}}{x^2} dx$

32.  $\int \frac{e^x - e^{-x}}{(e^x + e^{-x})^{3/2}} dx$

34.  $\int e^{-x}(1 + e^{-x}) dx$

36.  $\int \frac{(\ln u)^3}{u} du$

38.  $\int \frac{1}{x(\ln x)^2} dx$

40.  $\int \frac{(\ln x)^{7/2}}{x} dx$

42.  $\int \left( xe^{-x^2} + \frac{e^x}{e^x + 3} \right) dx$

44.  $\int \frac{e^{-u} - 1}{e^{-u} + u} du$

**Hint:** Let  $v = e^{-u} + u$ .

47.  $\int \frac{1 - \sqrt{x}}{1 + \sqrt{x}} dx$

**Hint:** Let  $u = 1 + \sqrt{x}$ .

49.  $\int v^2(1 - v)^6 dv$

**Hint:** Let  $u = 1 - v$ .