

$$871. y = \operatorname{tg} \frac{x}{2} - \operatorname{ctg} \frac{x}{2}.$$

$$872. y = \operatorname{tg} x - \frac{1}{3} \operatorname{tg}^3 x + \frac{1}{5} \operatorname{tg}^5 x.$$

$$873. y = 4 \sqrt[3]{\operatorname{ctg}^2 x} + \sqrt[3]{\operatorname{ctg}^8 x}.$$

$$874. y = \sec^2 \frac{x}{a} + \operatorname{cosec}^2 \frac{x}{a}.$$

$$875. y = \sin [\cos^2 (\operatorname{tg}^2 x)]. \quad 876. y = e^{-x^2}.$$

$$877. y = 2^{\operatorname{tg} 1/x}. \quad 878. y = e^x (x^2 - 2x + 2).$$

$$879. y = \left[\frac{1-x^2}{2} \sin x - \frac{(1-x)^2}{2} \cos x \right] e^{-x}.$$

$$880. y = e^x \left(1 + \operatorname{ctg} \frac{x}{2} \right).$$

$$881. y = \frac{\ln 3 \cdot \sin x + \cos x}{3^x}.$$

$$882. y = e^{ax} \frac{a \sin bx - b \cos bx}{\sqrt{a^2 + b^2}}.$$

$$883. y = e^x + e^{e^x} + e^{ee^x}.$$

$$884. y = \left(\frac{a}{b} \right)^x \left(\frac{b}{x} \right)^a \left(\frac{x}{a} \right)^b \quad (a > 0, b > 0).$$

$$885. y = x^{a^2} + a^{x^a} + a^{a^x} \quad (a > 0). \quad 886. y = \operatorname{ig}^3 x^3.$$

$$887. y = \ln (\ln (\ln x)). \quad 888. y = \ln (\ln^2 (\ln^3 x)).$$

$$889. y = \frac{1}{2} \ln (1+x) - \frac{1}{4} \ln (1+x^2) - \frac{1}{2(1+x)}.$$

$$890. y = \frac{1}{4} \ln \frac{x^2 - 1}{x^2 + 1}.$$

$$891. y = \frac{1}{4(1+x^2)} + \frac{1}{4} \ln \frac{x^4}{1+x^4}.$$

$$892. y = \frac{1}{2\sqrt{6}} \ln \frac{x\sqrt{3} - \sqrt{2}}{x\sqrt{3} + \sqrt{2}}.$$

$$893. y = \frac{1}{1-k} \ln \frac{1+x}{1-x} + \frac{\sqrt{k}}{1-k} \ln \frac{1+x\sqrt{k}}{1-x\sqrt{k}} \quad (0 < k < 1).$$

$$894. y = \sqrt{x+1} - \ln (1 + \sqrt{x+1}).$$