1 Differenciation

$$\frac{1}{\cos^2(x)} \tag{1}$$

$$-6e^{-6x+e^{-6x}}\ln(e)^2 \tag{2}$$

$$6\sin(x)\cot(\cos(x))\csc^6(\cos(x)) \tag{3}$$

$$-\frac{\sin(x)}{\tan(\cos(x))} \tag{4}$$

$$-\frac{\sin\left(\frac{1}{x}\right)}{x^2\cos^2\left(\frac{1}{x}\right)} \tag{5}$$

$$-\frac{e^{\cot(x)}\ln(e)}{\sin^2(x)} \tag{6}$$

$$-\frac{\tan(\tan(x))}{\cos^2(x)} \tag{7}$$

$$\frac{\cos(\tan(\tan(x)))}{\cos^2(x)\cos^2(\tan(x))} \tag{8}$$

$$-\frac{36}{x} \tag{9}$$

$$\frac{4\sin^3(\tan(x))\cos(\tan(x))}{\cos^2(x)} \tag{10}$$

$$-\frac{3}{\cos^2(x)\cos^2(\tan(x))} \tag{11}$$

$$\frac{1}{(\tan(x)+7)\cos^2(x)} \tag{12}$$

$$-2\left(\tan^2(2x+5)+1\right)\sin(\tan(2x+5)) \tag{13}$$

$$e^{-x}\ln(e)\sin\left(e^{-x}\right) \tag{14}$$

$$-\frac{4\sin(x)\tan^3(\cos(x))}{\cos^2(\cos(x))} \tag{15}$$

$$-\frac{9\ln(e)}{\ln(e^x)^{10}} \tag{16}$$

$$-\frac{\tan\left(\tan\left(\frac{1}{x}\right)\right)\sec\left(\tan\left(\frac{1}{x}\right)\right)}{x^2\cos^2\left(\frac{1}{x}\right)} \tag{17}$$

$$e^{\cos(\cos(x))}\ln(e)\sin(x)\sin(\cos(x)) \tag{18}$$

$$\frac{8\tan\left(\frac{1}{x^8}\right)}{x^9} \tag{19}$$

$$-\frac{8e^{\frac{1}{x^8}}\ln(e)}{x^9\cos^2\left(e^{\frac{1}{x^8}}\right)} \tag{20}$$

2 Matrices

$$\begin{bmatrix} -\frac{2}{33} & \frac{1}{33} & \frac{4}{33} \\ \frac{1}{154} & \frac{8}{77} & -\frac{13}{154} \\ \frac{89}{462} & \frac{19}{231} & -\frac{79}{462} \end{bmatrix} \tag{21}$$

$$\begin{bmatrix} -\frac{3}{34} & -\frac{1}{34} & \frac{1}{6} \\ \frac{1}{34} & -\frac{21}{170} & \frac{1}{10} \\ -\frac{2}{17} & -\frac{9}{85} & \frac{2}{15} \end{bmatrix} \tag{22}$$

$$\begin{bmatrix} 0 & -\frac{9}{23} & \frac{5}{23} \\ -\frac{1}{2} & -\frac{31}{23} & \frac{7}{23} \\ \frac{1}{2} & \frac{30}{23} & -\frac{9}{23} \end{bmatrix} \tag{23}$$

$$\begin{bmatrix} -\frac{1}{9} & \frac{1}{3} & -\frac{1}{9} \\ \frac{7}{18} & -\frac{1}{6} & -\frac{1}{9} \\ -\frac{11}{36} & -\frac{1}{12} & -\frac{1}{18} \end{bmatrix} \tag{24}$$

$$\begin{bmatrix} -\frac{1}{59} & -\frac{11}{59} & -\frac{4}{59} \\ -\frac{19}{59} & \frac{27}{59} & -\frac{17}{59} \\ \frac{23}{59} & -\frac{42}{59} & \frac{33}{59} \end{bmatrix} \tag{25}$$

$$\begin{bmatrix} \frac{28}{297} & -\frac{40}{297} & -\frac{53}{297} \\ \frac{2}{27} & \frac{1}{27} & \frac{2}{27} \\ \frac{37}{297} & \frac{32}{297} & -\frac{17}{297} \end{bmatrix} \tag{26}$$

$$\begin{bmatrix} \frac{50}{549} & \frac{56}{549} & \frac{1}{549} \\ \frac{14}{183} & \frac{23}{183} & -\frac{29}{183} \\ \frac{49}{549} & -\frac{11}{549} & -\frac{10}{549} \end{bmatrix} \tag{27}$$

$$\begin{bmatrix} \frac{1}{77} & \frac{38}{77} & \frac{3}{7} \\ \frac{6}{77} & -\frac{3}{77} & \frac{1}{14} \\ \frac{1}{11} & -\frac{6}{11} & -\frac{1}{2} \end{bmatrix} \tag{28}$$

$$\begin{bmatrix} \frac{72}{407} & -\frac{16}{407} & \frac{7}{407} \\ -\frac{5}{37} & -\frac{3}{37} & -\frac{1}{37} \\ -\frac{63}{407} & \frac{14}{407} & -\frac{57}{407} \end{bmatrix} \tag{29}$$

$$\begin{bmatrix} \frac{9}{17} & -\frac{4}{17} & -\frac{4}{17} \\ -\frac{1}{9} & 0 & \frac{1}{9} \\ -\frac{7}{17} & \frac{5}{17} & \frac{5}{17} \end{bmatrix} \tag{30}$$