1 Differenciation

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

$$e^{\cot(\ln(x))-1}\cot(\ln(x)) \tag{2}$$

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

$$e^{\cos(9x+9)-1}\cos(9x+9) \tag{4}$$

$$-\frac{5\cos(5\tan(x)+9)}{\cos^2(x)} \tag{5}$$

$$-4\left(\tan^2(\csc(x))+1\right)\tan^3(\csc(x))\cot(x)\csc(x) \tag{6}$$

$$-\frac{8\tan\left(5+\frac{8}{x}\right)\sec\left(5+\frac{8}{x}\right)}{x^2} \tag{7}$$

$$-\sin(x) \tag{8}$$

$$\frac{2}{x\sin(2\ln(x))} \tag{9}$$

$$-\frac{6\sin^5\left(\frac{1}{x}\right)\cos\left(\frac{1}{x}\right)}{x^2} \tag{10}$$

$$-\frac{12}{x\ln(x)^{13}} \tag{11}$$

$$-6\sin(6\sin(x)-2)\cos(x) \tag{12}$$

$$-\frac{\tan(x)}{\ln(\cos(x))} \tag{13}$$

$$-\frac{2}{x^3\cos^2\left(\frac{1}{x^2}\right)} \tag{14}$$

$$\tan(x) \tag{15}$$

$$e^{\cot^9(x)-1}\cot^9(x) \tag{16}$$

$$-\sin(x) \tag{17}$$

$$-\frac{1}{\sin(x)\sin^2(\ln(\tan(x)))\cos(x)} \tag{18}$$

$$\frac{\left(\cot^2(\csc(\ln(x)))+1\right)\cot(\ln(x))\csc(\ln(x))}{x} \tag{19}$$

$$-\frac{\cos(\cot(\tan(x)))}{\sin^2(\tan(x))\cos^2(x)} \tag{20}$$

2 Matrices

$$\begin{bmatrix} 0 & -\frac{1}{3} & -1 \\ \frac{1}{6} & -\frac{2}{3} & -\frac{5}{2} \\ -\frac{1}{2} & \frac{4}{3} & \frac{9}{2} \end{bmatrix} \tag{21}$$

$$\begin{bmatrix} -\frac{3}{23} & -\frac{4}{23} & -\frac{7}{184} \\ 0 & 0 & \frac{1}{8} \\ -\frac{2}{23} & \frac{5}{23} & \frac{49}{184} \end{bmatrix} \tag{22}$$

$$\begin{bmatrix} \frac{71}{650} & \frac{9}{50} & \frac{3}{325} \\ \frac{1}{13} & 0 & \frac{1}{13} \\ -\frac{31}{650} & \frac{1}{50} & \frac{17}{325} \end{bmatrix} \tag{23}$$

$$\begin{bmatrix} -\frac{1}{5} & -\frac{1}{5} & 0 \\ \frac{4}{53} & -\frac{2}{53} & -\frac{1}{53} \\ -\frac{1}{265} & -\frac{26}{265} & \frac{8}{53} \end{bmatrix} \tag{24}$$

$$\begin{bmatrix} \frac{4}{39} & \frac{2}{15} & -\frac{7}{65} \\ \frac{1}{39} & \frac{2}{15} & \frac{8}{65} \\ \frac{7}{39} & -\frac{1}{15} & -\frac{9}{65} \end{bmatrix} \tag{25}$$

$$\begin{bmatrix} -\frac{1}{11} & \frac{2}{11} & -\frac{1}{11} \\ \frac{12}{55} & \frac{1}{33} & -\frac{8}{165} \\ -\frac{1}{11} & -\frac{5}{33} & \frac{8}{33} \end{bmatrix} \tag{26}$$

$$\begin{bmatrix} -\frac{31}{56} & \frac{3}{7} & -\frac{15}{56} \\ -\frac{1}{28} & \frac{2}{7} & -\frac{5}{28} \\ -\frac{9}{56} & \frac{2}{7} & -\frac{17}{56} \end{bmatrix} \tag{27}$$

$$\begin{bmatrix} \frac{1}{7} & \frac{11}{182} & \frac{5}{182} \\ -\frac{1}{7} & \frac{5}{91} & -\frac{6}{91} \\ \frac{1}{7} & -\frac{45}{182} & -\frac{37}{182} \end{bmatrix} \tag{28}$$

$$\begin{bmatrix} \frac{3}{112} & -\frac{1}{8} & \frac{37}{336} \\ \frac{5}{112} & \frac{1}{8} & -\frac{13}{336} \\ \frac{19}{224} & -\frac{1}{16} & -\frac{9}{224} \end{bmatrix} \tag{29}$$

$$\begin{bmatrix} -\frac{17}{67} & \frac{6}{67} & \frac{4}{67} \\ -\frac{4}{67} & \frac{20}{201} & -\frac{3}{67} \\ \frac{29}{134} & -\frac{11}{402} & \frac{5}{134} \end{bmatrix} \tag{30}$$