1 Differenciation

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

$$-\frac{e^x \ln(e) \tan(\cot(e^x)) \sec(\cot(e^x))}{\sin^2(e^x)}$$
 (2)

$$-e^{\cos(\sin(x))}\ln(e)\sin(\sin(x))\cos(x)$$
(3)

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

$$-36x^8\cos\left(x^9\right) \tag{5}$$

$$\frac{\sin(x)\sin(\cos(x))}{\cos^2(\cos(\cos(x)))}\tag{6}$$

$$7x^6 \cos(x^7) \tan(\sin(x^7)) \sec(\sin(x^7)) \tag{7}$$

$$\frac{18\tan^{17}(x)}{\cos^2(x)}\tag{8}$$

$$-e^{\csc(x)}\ln(e)\tan\left(e^{\csc(x)}\right)\cot(x)\csc(x)\sec\left(e^{\csc(x)}\right)$$
(9)

$$-\frac{20}{x\ln\left(x\right)^{21}}\tag{10}$$

$$-\frac{2e^{x}\ln(e)}{3(2e^{x}-3)^{2}}\tag{11}$$

$$-\frac{\ln\left(e\right)}{\ln\left(e^x\right)^2}\tag{12}$$

$$\frac{7e^{\tan\left(x^{7}\right)}x^{6}\ln\left(e\right)}{\cos^{2}\left(x^{7}\right)}\tag{13}$$

$$5(\tan^2(5x+6)+1)\tan(\tan(5x+6))\sec(\tan(5x+6))$$
 (14)

$$\left(\tan^{2}\left(\ln\left(\sec\left(x\right)\right)\right)+1\right)\tan\left(x\right)\tag{15}$$

$$\frac{4\cot\left(\cot\left(x\right)\right)\csc^{4}\left(\cot\left(x\right)\right)}{\sin^{2}\left(x\right)}\tag{16}$$

$$-6\cos(x)\tan(\sin(x))\sec(\sin(x))\tag{17}$$

$$\frac{\cos\left(\ln\left(x\right)\right)}{x\cos^2\left(\sin\left(\ln\left(x\right)\right)\right)}\tag{18}$$

$$\frac{1}{\cos^2(x)}\tag{19}$$

$$-\frac{5\cot\left(\frac{1}{x}\right)\csc\left(\frac{1}{x}\right)}{x^2}\tag{20}$$

Matrices

$$\begin{bmatrix} -\frac{1}{42} & \frac{1}{28} & \frac{25}{384} & -\frac{1}{56} & -\frac{53}{672} \\ -\frac{1}{21} & \frac{1}{14} & -\frac{17}{168} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{7}{53} & -\frac{22}{477} & -\frac{4}{53} \\ -\frac{4}{53} & \frac{43}{954} & \frac{3}{106} \\ -\frac{5}{3} & -\frac{1}{106} & \frac{39}{106} \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{355} & -\frac{11}{11} & -\frac{39}{355} \\ -\frac{38}{355} & -\frac{13}{11} & -\frac{35}{355} \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{355} & -\frac{13}{11} & -\frac{39}{355} \\ -\frac{38}{355} & \frac{6}{71} & -\frac{11}{355} \end{bmatrix}$$

$$\begin{bmatrix} \frac{15}{71} & -\frac{8}{71} & \frac{11}{426} \\ -\frac{8}{71} & \frac{9}{71} & \frac{11}{71} & -\frac{14}{213} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{2}{9} & \frac{5}{27} & -\frac{1}{27} \\ \frac{1}{3} & -\frac{39}{99} & -\frac{89}{99} \\ -\frac{1}{9} & \frac{5}{297} & \frac{26}{297} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{17}{96} & -\frac{47}{192} & \frac{91}{192} \\ \frac{1}{48} & -\frac{19}{96} & -\frac{7}{96} \\ -\frac{1}{48} & -\frac{19}{96} & \frac{4}{96} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{2}{31} & -\frac{19}{5277} & \frac{105}{527} \\ \frac{3}{48} & -\frac{19}{96} & \frac{4}{96} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{2}{31} & -\frac{19}{527} & \frac{105}{527} \\ \frac{3}{48} & -\frac{19}{96} & \frac{4}{96} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{3}{121} & \frac{34}{527} & -\frac{249}{527} \\ -\frac{21}{31} & \frac{43}{527} & -\frac{121}{527} \end{bmatrix}$$

$$\begin{bmatrix} -\frac{3}{121} & \frac{34}{121} & -\frac{2}{121} \\ -\frac{12}{121} & \frac{115}{121} & -\frac{8}{121} \\ -\frac{12}{121} & \frac{121}{121} & -\frac{12}{121} \\ -\frac{12}{121} & \frac{121}{121} & -\frac{12}{121} \\ -\frac{12}{121} & \frac{13}{121} & -\frac{2}{121} \\ -\frac{13}{123} & -\frac{43}{363} & \frac{363}{363} \end{bmatrix}$$

$$(21)$$

$$\begin{bmatrix}
-\frac{7}{53} & -\frac{22}{477} & -\frac{4}{53} \\
-\frac{4}{53} & \frac{43}{954} & \frac{3}{106} \\
-\frac{4}{53} & -\frac{7}{106} & \frac{3}{106}
\end{bmatrix} (22)$$

$$\begin{bmatrix}
\frac{17}{355} & -\frac{11}{71} & -\frac{39}{355} \\
-\frac{38}{355} & -\frac{13}{71} & -\frac{59}{355} \\
\frac{23}{355} & \frac{6}{71} & -\frac{11}{355}
\end{bmatrix}$$
(23)

$$\begin{bmatrix} \frac{15}{71} & -\frac{8}{71} & \frac{11}{426} \\ -\frac{8}{71} & \frac{9}{71} & \frac{16}{213} \\ \frac{7}{71} & \frac{1}{71} & -\frac{14}{213} \end{bmatrix}$$
 (24)

$$\begin{bmatrix}
-\frac{2}{9} & \frac{5}{27} & -\frac{1}{27} \\
\frac{1}{3} & -\frac{32}{99} & -\frac{8}{99} \\
-\frac{1}{9} & \frac{5}{297} & \frac{26}{297}
\end{bmatrix}$$
(25)

$$\begin{bmatrix}
-\frac{17}{96} & -\frac{47}{192} & \frac{91}{192} \\
\frac{5}{48} & \frac{11}{96} & -\frac{7}{26} \\
-\frac{13}{48} & -\frac{19}{96} & \frac{47}{96}
\end{bmatrix}$$
(26)

$$\begin{bmatrix}
-\frac{2}{31} & -\frac{19}{527} & \frac{105}{527} \\
\frac{3}{31} & \frac{44}{527} & -\frac{49}{527} \\
-\frac{2}{31} & \frac{43}{527} & \frac{12}{527}
\end{bmatrix}$$
(27)

$$\begin{bmatrix} -\frac{3}{121} & \frac{34}{121} & -\frac{2}{121} \\ -\frac{12}{121} & \frac{15}{121} & -\frac{8}{121} \\ -\frac{14}{363} & -\frac{43}{363} & \frac{31}{363} \end{bmatrix}$$
 (28)

$$\begin{bmatrix}
-\frac{41}{1^{32}} & \frac{13}{33} & -\frac{53}{1^{32}} \\
\frac{1}{6} & -\frac{1}{3} & \frac{1}{6} \\
-\frac{9}{44} & \frac{5}{11} & -\frac{17}{44}
\end{bmatrix}$$
(29)

$$\begin{bmatrix}
\frac{10}{43} & \frac{11}{172} & \frac{1}{43} \\
-\frac{27}{86} & \frac{9}{344} & -\frac{7}{86} \\
\frac{7}{42} & \frac{3}{42} & \frac{5}{42}
\end{bmatrix}$$
(30)