

$$f_1(X) = (\sum_{i=0}^{n-1} (\log \frac{e^{X_i \times X_i} + X_i \times X_i + X_i \times X_i + \sqrt{-(X_i)}}{3} - \frac{-(X_i \times X_i)}{\sqrt{X_i} + |X_i|}))^{-2} - \cos(\frac{1}{n-1} \sum_{i=0}^{n-2} (|-(\frac{X_{i+1} - X_i + X_i - X_{i+1}}{|X_i| + |X_i| + X_i \times X_i})|))$$

$$f_2(X) = |\sum_{i=0}^{n-1} (-((\log X_i - |X_i| + \tanh(\frac{X_i}{C1_i}) + \sqrt{|X_i|})^{C2_i})) - \sum_{i=0}^{n-1} (\sqrt{\log \frac{-(X_i) - e^{X_i}}{|X_i \times X_i|}})|$$

where :

$$\begin{aligned} C1 &= [-0.7, 10.] \\ C2 &= [-3, -3] \end{aligned}$$

$$f_3(X) = |\sum_{i=0}^{n-2} ((\sin(X_i + X_{i+1} - \frac{C1_i}{X_i}))^{C2_i})| \times |\sum_{i=0}^{n-1} (\tanh(\frac{\frac{X_i}{C3_i} + \frac{X_i}{C4_i}}{2}))|$$

1

where :

$$\begin{aligned} C1 &= [-9., 50., -7., 0.8] \\ C2 &= [-2, -2, -2, -3] \\ C3 &= [-2., -27.18281828, 40., -50., 30.] \\ C4 &= [8., -30., 1., -10., -2.] \end{aligned}$$

$$\begin{aligned} f_4(X) = & (\sum_{i=0}^{n-2} (\log -(\sqrt{X_i} + \frac{X_{i+1}}{X_i}) - \sqrt{-(e^{X_i})} \times \cos(e^{\frac{X_i}{X_{i+1}}} - \frac{X_i + X_{i+1} + X_i + X_{i+1}}{\frac{C1_i}{X_{i+1}}})) \\ & + |\frac{\log X_{i+1} + X_i \times X_i + \tanh(X_{i+1}) + \frac{X_i}{X_{i+1}}}{4} \times \frac{-(X_i) + e^{X_{i+1}} + e^{X_i} + \cos(X_{i+1})}{4}|))^{-3} + \sin(\frac{1}{n} \sum_{i=0}^{n-1} ((|X_i + C2_i \times |X_i + C3_i||)^{C4_i})) \end{aligned}$$

where :

$$\begin{aligned} C1 &= [-10., -7., 30., -50., 9., -50., -0.5, -10., -50.] \\ C3 &= [-0.4, 0.8, -0.31415927, 2.71828183, -0.5, 0.6, -3., -0.8, 0.27182818, 0.1] \\ C4 &= [-0.6, -1., -0.4, 0.7, 5., 3., -2., -0.5, 1., 0.3] \\ C5 &= [-2, -2, -2, -3, -2, -2, 3, 3, 2, 2] \end{aligned}$$

$$f_5(X) = \cos\left(\frac{\sum_{i=0}^{n-1}(\sqrt{X_i} - X_i + X_i \times \frac{X_i + X_i}{2} - |X_i|)}{\frac{1}{n} \sum_{i=0}^{n-1}(X_i - C1_i \times X_i \times X_i + \sqrt{e^{X_i}})}\right)$$

where :

$$C1 = [-3., 0.4]$$

$$f_6(X) = e^{\cos\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{X_{i+1} - X_i \times -(C1_i + X_i) + \frac{X_i + X_i \times \sqrt{X_{i+1}}}{|-(X_{i+1})|}}{-\left(\frac{C2_i + X_i + X_{i+1} + X_i}{4} + X_{i+1} \times C3_i\right)C4_i}\right)\right)}$$

where :

$$C1 = [-0.9]$$

$$C2 = [-3.14159265]$$

$$C3 = [-0.5]$$

$$C4 = [3]$$

2

$$f_7(X) = \tanh\left(\sum_{i=0}^{n-1}\left(\sqrt{\frac{C1_i}{X_i}} - X_i + C2_i\right)\right) \times \sin\left(\frac{1}{n} \sum_{i=0}^{n-1}\left(\frac{X_i + C3_i}{e^{X_i}} - \frac{X_i + X_i + C4_i}{3} + \frac{X_i}{C5_i}\right)\right)$$

where :

$$C1 = [6., -30.]$$

$$C2 = [0.2, -0.4]$$

$$C3 = [-0.1, -0.27182818]$$

$$C4 = [-2.71828183, 0.5]$$

$$C5 = [-0.6, -2.]$$

$$f_8(X) = \sum_{i=0}^{n-1} \left(\frac{\cos(e^{|X_i|} + \sqrt{e^{X_i}} \times |\sqrt{|X_i|}|) + \log\left(\frac{|X_i|}{|X_i \times X_i|} \times -(X_i + C1_i)\right)C2_i + |(e^{-(\log X_i)})^{C3_i}|}{3} \right) \times e^{-\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\sqrt{\frac{\log X_i + (X_i)C4_i + -(X_i) + \sqrt{X_i}}{4}}\right)\right)}$$

where :

$$\begin{aligned}
C1 &= [2.71828183, -3., 0.31415927, -4., 0.3] \\
C2 &= [-3, 2, 3, 3, -3] \\
C3 &= [2, 3, -3, 2, 3] \\
C4 &= [-3, 2, 3, -2, 2]
\end{aligned}$$

$$f_9(X) = \cos((\frac{1}{n} \sum_{i=0}^{n-1} (\frac{e^{|X_i| + -(X_i)|}}{\sqrt{|e^{\sqrt{X_i}}|}}))^3)$$

$$f_{10}(X) = \cos(\sum_{i=0}^{n-1} (|e^{|X_i| - -(X_i)} + \sqrt{-(X_i - C1_i)}|))$$

where :

∞

$$C1 = [0.8, 3.]$$

$$f_{11}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (\sin(|\frac{(X_i - X_{i+1})^{C1_i} + \frac{X_{i+1} - X_i}{\sqrt{X_i}} + X_i \times X_{i+1} + |X_i| + |X_i \times X_i|}{4} + \frac{|(X_i)^{C2_i}| + (-(X_i))^{C3_i}}{2}|))$$

where :

$$\begin{aligned}
C1 &= [-3] \\
C2 &= [3] \\
C3 &= [-3]
\end{aligned}$$

$$f_{12}(X) = \sin(|\frac{1}{n} \sum_{i=0}^{n-1} (-(\frac{X_i + C1_i}{X_i + C2_i}) + (-(X_i))^{C3_i} + |X_i| + \frac{X_i}{C4_i} - |(|X_i|)^{C5_i} \times \frac{X_i + X_i}{\frac{X_i + X_i}{2}}|)|)$$

where :

$$\begin{aligned}
C1 &= [-5., -0.6] \\
C2 &= [0.2, -3.14159265] \\
C3 &= [3, 2] \\
C4 &= [0.8, 0.9] \\
C5 &= [-2, -3]
\end{aligned}$$

$$f_{13}(X) = \sin\left(\sum_{i=0}^{n-1} \left(\left(\sqrt{\frac{e^{X_i+C1_i} + \frac{X_i}{C2_i} + \sqrt{X_i} + \frac{C3_i}{X_i} - C4_i \times X_i + X_i \times X_i - \sqrt{X_i}}{4}} \right)^{C5_i} \right) + \frac{1}{n} \sum_{i=0}^{n-1} \left(-(|-(X_i)| + |-(X_i)| \times \frac{(X_i \times X_i)^{C6_i}}{X_i + C7_i + X_i \times X_i}) \right) \right)$$

where :

$$\begin{aligned}
C1 &= [0.2, -2.] \\
C2 &= [-3.14159265, -4.] \\
C3 &= [20., 0.7] \\
C4 &= [1., -50.] \\
C5 &= [-3, 3] \\
C6 &= [-2, -3] \\
C7 &= [0.4, -0.7]
\end{aligned}$$

$$f_{14}(X) = \sin\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(-\left(e^{|X_i|} + \sqrt{X_i} + \sqrt{X_i} \right) \times |X_i - C1_i + \frac{C2_i}{X_i}| + \frac{e^{X_i \times X_i}}{e^{\frac{X_i}{C3_i}}} \right) \right)$$

where :

$$\begin{aligned}
C1 &= [-40., 40.] \\
C2 &= [40., 0.8] \\
C3 &= [0.6, 0.6]
\end{aligned}$$

$$f_{15}(X) = \left(\frac{1}{n} \sum_{i=0}^{n-1} \left(-\left(\sin\left(-\left(\sqrt{X_i} \right) \times X_i - C1_i - \frac{X_i + X_i + X_i}{3} \right) \right) \right) \right)^{-2}$$

where :

$$C1 = [0.9, -3., -2.71828183, 0.7, 0.5]$$

$$f_{16}(X) = (\frac{1}{n-1} \sum_{i=0}^{n-2} (\log |C1_i \times X_i| + X_i + X_i \times X_{i+1} + X_{i+1}))^{-3} + \sqrt{\frac{1}{n-1} \sum_{i=0}^{n-2} (|\cos(X_{i+1}) - X_{i+1} + X_i| + -(-(X_{i+1}) - \sqrt{X_i}))}$$

where :

$$C1 = [-0.7, 0.7, -6., -9., 10., -3., -9., 0.9, 0.8]$$

$$f_{17}(X) = \frac{\frac{\frac{1}{n-1} \sum_{i=0}^{n-2} (|-(X_{i+1}) + (X_{i+1})^{C1_i} \times e^{X_i} - (X_{i+1})^{C2_i} \times \frac{-(X_i) + e^{X_{i+1}}}{2} - \sqrt{X_{i+1} + X_i}|)}{\sum_{i=0}^{n-1} ((C3_i + X_i)^{C4_i})}}{e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (\log \frac{X_i - X_{i+1}}{\frac{X_i + X_{i+1}}{2}})}}$$

↺

where :

$$\begin{aligned} C1 &= [-2, 3, -2, -3, 3, -2, 3, 2, 2] \\ C2 &= [-3, 3, 3, -2, -3, -3, 3, 3, 2] \\ C3 &= [0.4, 0.3, 0.5, 0.2, -0.4, -5., 5., 0.4, 0.7, 0.4] \\ C4 &= [2, 2, 3, 3, 2, 3, 2, 2, -2, -2] \end{aligned}$$

$$f_{18}(X) = \frac{(\sum_{i=0}^{n-1} (\frac{\frac{\cos(-(X_i) - X_i - C1_i \times \frac{C2_i - X_i}{-(X_i)})}{\tanh(X_i \times C3_i) + \frac{X_i - C4_i}{\tanh(X_i)}} + \cos(-(-(X_i + C5_i) + e^{X_i - C6_i})) + e^{|\tanh(|X_i|) + \tanh(X_i \times C7_i)|} + \log \sqrt{e^{-(X_i)} \times \sqrt{X_i} \times X_i} - \frac{X_i}{C8_i} \times \sqrt{X_i}}{4}))^{-2}}{\sum_{i=0}^{n-1} (\sin(e^{-(\sqrt{X_i} + X_i \times X_i))^{C9_i}})) \times \frac{1}{n} \sum_{i=0}^{n-1} (|\frac{\frac{X_i + X_i + X_i}{3}}{X_i + C10_i}|)}$$

where :

$$\begin{aligned} C1 &= [-2., -0.27182818] \\ C2 &= [-0.2, -0.4] \\ C3 &= [-2., -27.18281828] \\ C4 &= [0.8, -5.] \\ C5 &= [-1., 1.] \end{aligned}$$

$$\begin{aligned}
C6 &= [-2., 3.] \\
C7 &= [-4., 20.] \\
C8 &= [-27.18281828, 7.] \\
C10 &= [3, 2] \\
C11 &= [2.71828183, 0.3]
\end{aligned}$$

$$f_{19}(X) = \sum_{i=0}^{n-2} (e^{\cos(\frac{X_{i+1}}{X_i})}) - (\sum_{i=0}^{n-2} (-(\cos(X_{i+1} + X_{i+1})) + -(X_{i+1}) \times \cos(X_{i+1}) + \frac{X_i}{X_{i+1}} + \cos(X_{i+1}) + \log X_{i+1} - \cos(X_{i+1})))^{-2}$$

$$f_{20}(X) = (\sum_{i=0}^{n-1} (\cos(e^{X_i + C1_i})))^2 - \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(|\sqrt{|X_{i+1} - X_i|}| \times \frac{-((X_{i+1})^{C2_i} - \frac{X_i}{X_{i+1}}))}{\frac{X_i}{C3_i} - \frac{X_{i+1} + X_{i+1} + X_i}{3} - e^{X_{i+1}} + X_{i+1} - X_i + C4_i + X_i}))$$

where :

$$\begin{aligned}
C1 &= [-1., -3.] \\
C3 &= [3] \\
C4 &= [-2.71828183] \\
C5 &= [3.14159265]
\end{aligned}$$

$$f_{21}(X) = |e^{\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{-\cos(\frac{(X_i)^{C1_i}}{X_i - X_i - C2_i})})} - \sum_{i=0}^{n-1} (\frac{X_i - C3_i + \tanh(X_i) + (\sin(X_i))^{C4_i} + \sqrt{X_i \times X_i}}{3})|$$

where :

$$\begin{aligned}
C1 &= [3, -2] \\
C2 &= [3.14159265, -3.14159265] \\
C3 &= [3., 0.1] \\
C4 &= [3, 2]
\end{aligned}$$

$$f_{22}(X) = \sum_{i=0}^{n-1} (\cos(\frac{e^{X_i}}{\frac{X_i + X_i}{2}})) \times \sum_{i=0}^{n-1} (\sin(\sqrt{-(X_i)})) + \sum_{i=0}^{n-2} (\cos(\sqrt{\frac{\frac{X_i \times X_i}{e^{X_{i+1}}} + \frac{X_{i+1}}{C1_i}}{2}}))$$

where :

$$C1 = [-0.6]$$

$$f_{23}(X) = \cos(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\frac{X_{i+1}+C1_i+X_i+X_{i+1}}{4}-X_{i+1}+X_i})) - |\frac{1}{n} \sum_{i=0}^{n-1} (\sin((\sqrt{X_i})^{C2_i}))|$$

where :

$$\begin{aligned} C1 &= [0.3] \\ C2 &= [-2, -3] \end{aligned}$$

$$f_{24}(X) = |\sum_{i=0}^{n-2} (\cos(-(\sqrt{(X_i)^{C1_i}}))) \times \frac{1}{n} \sum_{i=0}^{n-1} (|\cos(\frac{-(X_i)}{e^{X_i}})|)|$$

↗

where :

$$C1 = [-2]$$

$$f_{25}(X) = \cos(\frac{1}{n} \sum_{i=0}^{n-1} (||X_i|-e^{X_i} - -(\frac{X_i}{C1_i})|)) + (\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{\tanh(-(X_i) + \sqrt{X_{i+1}})))^3$$

where :

$$C1 = [5., -50.]$$

$$f_{26}(X) = \sin(\frac{\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{e^{|X_i|} + e^{X_i} - |X_i|} - \frac{e^{X_i - C1_i} + X_i - C2_i + X_i \times X_i + (\sqrt{X_i})^{C3_i} + \sqrt{(X_i)^{C4_i}}}{4} - e^{|X_i| - X_i + X_i})}{\sum_{i=0}^{n-1} (\frac{X_i + C5_i \times e^{X_i} - e^{\frac{X_i}{C6_i} + (-X_i \times X_i)^{C7_i}}}{(\sqrt{|e^{X_i}|})^{C8_i}})})$$

where :

$$\begin{aligned}
C1 &= [-0.27182818, -0.5] \\
C2 &= [0.6, -0.9] \\
C3 &= [3, -2] \\
C4 &= [2, 3] \\
C5 &= [0.6, -0.3] \\
C6 &= [-1., -0.8] \\
C7 &= [3, 2] \\
C8 &= [-3, -3]
\end{aligned}$$

$$f_{27}(X) = \cos(\frac{1}{n} \sum_{i=0}^{n-1} (|\frac{(X_i)^{C1_i} + (|X_i|)^{C2_i} + \sqrt{X_i} + (X_i)^{C3_i}}{4}|)) + e^{\frac{1}{n} \sum_{i=0}^{n-1} (\sin(\sqrt{-(X_i)}))}$$

where :

$$\begin{aligned}
C1 &= [-3, 3] \\
C2 &= [2, -2] \\
C3 &= [2, 3]
\end{aligned}$$

∞

$$f_{28}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (\cos((-(|X_i + C1_i|) \times |\sqrt{X_i} + e^{X_i}| + - (e^{X_i} \times X_i - C2_i) - |\sqrt{e^{X_i}}| + - (X_i) + \frac{X_i}{C3_i} - -(X_i \times X_i) + X_i - C4_i + |\frac{\sqrt{X_i}}{e^{X_i}}|)^{C5_i}))$$

where :

$$\begin{aligned}
C1 &= [4., 0.9] \\
C2 &= [0.7, -0.2] \\
C3 &= [6., 0.6] \\
C4 &= [5., 3.14159265] \\
C5 &= [3, -3]
\end{aligned}$$

$$f_{29}(X) = (\cos(\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{-(e^{\sqrt{X_i}})} + |\sqrt{|X_i|} \times e^{\sqrt{X_{i+1}}}| + - (|\sqrt{X_{i+1}} \times X_i|) + |X_i \times X_i| \times \frac{e^{X_i}}{X_i + X_i} - \sqrt{|-(X_i)|})))^3$$

$$f_{30}(X) = \cos(\sum_{i=0}^{n-2} (-((\sqrt{-(X_{i+1})})^{C1_i}))) \times -(\frac{1}{n} \sum_{i=0}^{n-1} (|\cos(|e^{X_i}|)|))$$

where :

$$C1 = [2, -2, 2, -3, 3, 2, -3, 3, 2]$$

$$f_{31}(X) = (\sum_{i=0}^{n-1} (\frac{X_i + C1_i + \frac{X_i}{C2_i}}{2}))^{-3} + (\sum_{i=0}^{n-1} (e^{\sqrt{\cos(\frac{X_i + X_i}{2})}}))^2$$

where :

$$C1 = [-2.71828183, -5., 0.5, 0.27182818, -2., -2., -5., 2.71828183, -0.8, 1.]$$

$$C2 = [-0.7, 0.5, 3., -4., -20., 31.41592654, -0.5, 27.18281828, 0.8, -20.]$$

6

$$f_{32}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\sqrt{\frac{X_i + X_i}{2}} + e^{X_i}) \times \frac{|-((X_i)^{C1_i})| + \tanh(X_i + C2_i)}{2}) + \sum_{i=0}^{n-2} ((-(X_{i+1}))^{C3_i}) \times \sin(\sum_{i=0}^{n-2} (|X_{i+1} + X_i + X_{i+1} - X_i|))$$

where :

$$C1 = [3, -2, 3, 3, -3]$$

$$C2 = [0.27182818, 2., 3.14159265, -0.7, 0.2]$$

$$C3 = [3, 2, 2, 2]$$

$$f_{33}(X) = |\frac{1}{n-1} \sum_{i=0}^{n-2} (\sin(\frac{\sqrt{-(\frac{X_i}{X_{i+1}})}}{\frac{-(X_i \times X_i)}{(\sqrt{X_{i+1}})^{C1_i}} - |X_i \times C2_i + X_i|}))| \times \frac{1}{n} \sum_{i=0}^{n-1} (\frac{X_i}{C3_i} + \sin(X_i) - \frac{(X_i)^{C4_i}}{\sin(X_i)}) + \sum_{i=0}^{n-2} (\cos(e^{X_i} + \sqrt{X_i}))$$

where :

$$C1 = [3, 3, -3, -3, 2, 3, 3, -2, -3]$$

$$C2 = [-27.18281828, 7., 31.41592654, 27.18281828, -8., 1., 2.71828183, -8., 0.7]$$

$$C3 = [8., 8., 4., 30., 7., 40., -2., -1., 20., 0.8]$$

$$C4 = [-2, -3, -3, 2, -3, 2, -2, -2, -3, 2]$$

$$f_{34}(X) = \log \frac{1}{n-1} \sum_{i=0}^{n-2} (-(X_{i+1}) + e^{|X_{i+1}|}) \times \frac{1}{n-1} \sum_{i=0}^{n-2} ((X_{i+1})^{C1_i} \times \sin(-(X_{i+1}))) + \frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{(X_i)^{C2_i}}{\sqrt{X_i}} + (e^{X_i+C3_i})^{C4_i} + X_i \times e^{X_i+C5_i} + \sin(X_i \times X_i) \right)$$

where :

$$\begin{aligned} C1 &= [-3, 3, 3, -3] \\ C2 &= [2, 2, 3, -2, -3] \\ C3 &= [-0.7, 0.27182818, -0.31415927, -2.71828183, 4.] \\ C4 &= [2, -3, -3, -2, -2] \\ C5 &= [-0.7, 0.27182818, -0.31415927, -2.71828183, 4.] \end{aligned}$$

$$f_{35}(X) = \cos\left(\sum_{i=0}^{n-2} \left(\left| \frac{(X_{i+1} + X_{i+1} - X_{i+1} + X_i)^{C1_i} + \frac{X_i \times C2_i \times \frac{X_i}{X_{i+1}}}{X_{i+1}}}{\sqrt{\frac{e^{\sqrt{X_{i+1}}}}{|X_{i+1}| + X_{i+1} + X_{i+1}}}} \right| \right) \right) - \log \sum_{i=0}^{n-1} \left(\left| e^{\frac{C3_i + \frac{X_i}{C4_i} + \frac{-(X_i)}{-(|\sqrt{X_i}|)}}{2}} \right| \right)^{C5_i}$$

where :

$$\begin{aligned} C1 &= [3] \\ C2 &= [2.71828183] \\ C3 &= [0.5, 0.3] \\ C4 &= [-9., -10.] \\ C5 &= [2, 3] \end{aligned}$$

$$f_{36}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(|e^{X_{i+1}}| - (X_{i+1}) + \sqrt{-((X_{i+1})^{C1_i} + X_{i+1} + X_i + e^{X_i}))}) - |\sin(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{X_{i+1}+X_{i+1}}))| + \sum_{i=0}^{n-2} (\tanh(\frac{|X_i| + X_{i+1} - X_i}{2}))$$

where :

$$C1 = [-2]$$

$$f_{37}(X) = \left| \frac{1}{n} \sum_{i=0}^{n-1} (X_i) \right| \times \cos\left(\sum_{i=0}^{n-2} (|e^{X_i+X_{i+1}}|)\right)$$

$$f_{38}(X) = \frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{\sin((X_i)^{C1_i})}{\log \frac{X_i}{C2_i}} \right) - \frac{1}{n} \sum_{i=0}^{n-1} \left(\tanh\left(\frac{\sqrt{X_i}}{C3_i}\right) \right) \times \log \sum_{i=0}^{n-1} \left(e^{-(\sqrt{X_i + \frac{X_i + X_i}{2}})} \right)$$

where :

$$\begin{aligned} C1 &= [2, -3] \\ C2 &= [-27.18281828, 8.] \\ C3 &= [0.6, -0.7] \end{aligned}$$

$$f_{39}(X) = \frac{\sum_{i=0}^{n-2} \left(\sin\left(\frac{(X_i)^{C1_i}}{X_{i+1} + X_i + X_{i+1}}\right) \right)}{\sum_{i=0}^{n-1} (|\sqrt{|\sqrt{\frac{C2_i + X_i + X_i}{3}}|}|)} \times \frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{e^{\cos(X_i)}}) + \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(e^{X_{i+1}} \times X_i + X_{i+1} + X_i))$$

where :

$$\begin{aligned} C1 &= [2] \\ C2 &= [3., 2.71828183] \end{aligned}$$

11

$$f_{40}(X) = \left| \sum_{i=0}^{n-1} \left((e^{\tanh(X_i \times X_i) - X_i \times X_i + X_i + X_i})^{C1_i} \right) \right| - \left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\left| \frac{\log X_{i+1} + \cos(X_i)}{2} \right| - \sqrt{X_{i+1}} \times \log X_{i+1} \times \sqrt{X_i + X_i} + -(e^{\sqrt{X_{i+1}}}) \right) \right)^{-2}$$

where :

$$C1 = [3, -2]$$

$$f_{41}(X) = e^{\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sin\left(\frac{X_i}{X_{i+1}} + X_i - X_{i+1}\right) \right)} \times \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\left| \log \frac{X_i + X_i + X_i}{\frac{X_{i+1}}{X_i}} \right| \right)$$

$$f_{42}(X) = \cos\left(\sum_{i=0}^{n-2} \left(\sqrt{\frac{\frac{X_{i+1}+X_{i+1}+X_i+X_{i+1}+-(X_i)}{4}}{|X_{i+1}-X_i|}}\right)\right) - \frac{1}{n} \sum_{i=0}^{n-1} \left(\cos\left(\frac{\sqrt{\left(\frac{X_i}{C2_i} \times X_i - C3_i\right)^{C4_i} + (e^{X_i \times X_i})^{C5_i} \times \frac{-(X_i)}{-((X_i)^{C6_i})} - \frac{\sqrt{X_i}}{|X_i|} + \frac{-(X_i) - -(C7_i - X_i)}{-(X_i) \times C8_i + X_i} \times \frac{X_i}{C9_i} + X_i \times X_i \times e^{X_i + C10_i} + \frac{-(C11_i \times X_i)}{(e^{X_i})^{C12_i}} \times (e^{C13_i \times X_i})^{C14_i}}}{4}\right)\right)$$

where :

$$\begin{aligned} C1 &= [2] \\ C2 &= [1., 1.] \\ C3 &= [0.2, -0.27182818] \\ C4 &= [2, 3] \\ C5 &= [-3, -2] \\ C6 &= [3, 3] \\ C7 &= [-0.2, -0.1] \\ C8 &= [0.27182818, -4.] \\ C9 &= [-30., 3.] \\ C10 &= [0.8, -2.71828183] \\ C11 &= [5., 20.] \\ C12 &= [2, -3] \\ C13 &= [3., -1.] \\ C14 &= [-3, -3] \end{aligned}$$

$$f_{43}(X)$$

$$= -\left(\sum_{i=0}^{n-1} (\cos((-(|X_i|) + -(e^{X_i}) + |-(e^{X_i})|)^{C1_i})))\right) + -\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sqrt{\sin\left(\frac{|\sqrt{X_i}| + \sqrt{X_i} \times \bar{X}_i + \sqrt{X_i} - (X_{i+1})^{C2_i} + -\left(\frac{X_i}{\bar{X}_{i+1}}\right)}{4} - \frac{\sqrt{e^{X_i}} + (e^{X_i})^{C3_i} + X_{i+1} \times C4_i + \frac{X_{i+1}}{\bar{X}_i}}{3}\right)}\right)\right)$$

where :

$$\begin{aligned} C1 &= [-3, 3] \\ C2 &= [-2] \\ C3 &= [-3] \\ C4 &= [4.] \end{aligned}$$

$$f_{44}(X) = \cos\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\sqrt{\frac{e^{X_i} + e^{X_i}}{2}} - (X_i)^{C1_i} \times |X_i| - - (X_i) + e^{X_i}\right)\right) + \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sqrt{-(\sqrt{\log X_{i+1}}) + -(X_i)}\right)$$

where :

$$C1 = [3, 3, 3, 2, 3]$$

$$f_{45}(X) = \sin\left(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\sqrt{X_{i+1}+X_i+X_{i+1}+X_i}})\right) - \left(\sum_{i=0}^{n-2} \left(\sin(X_{i+1} + X_i - \frac{X_{i+1}}{X_i} + \frac{|X_{i+1}|}{X_i + X_{i+1}})\right)\right)$$

$$f_{46}(X) = \cos\left(\sum_{i=0}^{n-1} \left(\sqrt{-\left(\frac{e^{\sqrt{X_i}} + (X_i + C1_i)^{C2_i}}{2}\right)}\right)\right) \times -\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\cos\left(\frac{\sqrt{X_i} - e^{X_i} + X_i - C3_i + |e^{X_i}|}{\frac{(X_i \times C4_i)^{C5_i}}{\frac{X_i}{C6_i} + \sqrt{X_i}}}} \times (e^{X_i - C7_i + \frac{X_i}{C8_i} + X_i \times X_i})^{C9_i}\right)\right)\right)$$

where :

$$\begin{aligned} C1 &= [0.5, 0.4, -3., -0.4, 0.5, 0.1, 0.1, -2., -0.7, -0.7] \\ C2 &= [-3, 2, 3, -3, 3, -2, 2, 2, -2, -2] \\ C3 &= [0.5, -4., -0.6, 3.14159265, -0.7, 2.71828183, -1., -0.27182818, -0.27182818, 0.27182818] \\ C4 &= [-7., 9., 5., -30., 0.6, 20., 20., -7., 3., -0.6] \\ C5 &= [-3, -2, 3, 2, 2, 2, 2, -3, -2, -3] \\ C6 &= [0.5, -5., 20., 0.5, -30., 20., 0.8, 31.41592654, -6., 9.] \\ C7 &= [0.8, -0.2, -0.27182818, 2.71828183, 1., 0.27182818, -0.1, 1., -1., -3.] \\ C8 &= [50., -0.8, 0.6, 31.41592654, -31.41592654, 31.41592654, 2.71828183, -3., 0.6, -0.8] \\ C9 &= [-2, 3, 2, -3, 2, 3, 2, 3, -2, 3] \end{aligned}$$

$$f_{47}(X) = \left| \frac{1}{n-1} \sum_{i=0}^{n-2} \left(-((X_{i+1})^{C1_i}) + \frac{X_{i+1} + X_{i+1} + (X_{i+1})^{C2_i}}{2} \right) \right| \times \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\cos\left(\frac{X_{i+1} + X_i}{2}\right) \right)$$

where :

$$\begin{aligned} C1 &= [-3, -3, 2, 2, 2, 2, -2, 2, -3] \\ C2 &= [-3, 2, 3, 2, 3, 2, 2, -2, -2] \end{aligned}$$

$$f_{48}(X) = -(\frac{1}{n-1} \sum_{i=0}^{n-2} (\frac{\cos(X_{i+1} \times \frac{|X_i+X_i|}{\sqrt{X_{i+1}}} + -(\frac{X_i+X_{i+1}}{2}))}{-(X_{i+1})})) + e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (|\sqrt{(X_i)^{C1_i} \times \sin(X_i)}| - \sqrt{(\frac{X_i}{C2_i} - \sin(X_i))^{C3_i}})}$$

where :

$$\begin{aligned} C1 &= [-3, -2, 3, -2, 2, -3, -3, -2, -2] \\ C2 &= [-31.41592654, 2., -3.14159265, -0.5, 9., -20., 7., 5., -2.71828183] \\ C3 &= [-2, 3, 2, -3, 3, -3, -2, 2, 2] \end{aligned}$$

$$f_{49}(X) = (\frac{1}{n-1} \sum_{i=0}^{n-2} (\frac{C1_i - X_{i+1} \times \frac{X_i+X_{i+1}}{2}}{X_{i+1} + X_{i+1}} \times C2_i - X_{i+1} \times \sqrt{C3_i - X_{i+1}}))^3 + \frac{1}{n-1} \sum_{i=0}^{n-2} (X_{i+1} + X_{i+1} \times X_{i+1} - C4_i + \cos(X_i))$$

where :

$$\begin{aligned} C1 &= [-0.2, -0.3, -0.5, -0.9] \\ C2 &= [-0.2, -0.3, -0.5, -0.9] \\ C3 &= [-0.2, -0.3, -0.5, -0.9] \\ C5 &= [0.8, -3.14159265, -0.9, 0.8] \end{aligned}$$

$$f_{50}(X) = (\frac{1}{n} \sum_{i=0}^{n-1} (\frac{e^{\frac{\tanh(X_i)}{\cos(X_i)}}}{\tanh(\sqrt{X_i} \times -(X_i))} - \sin(-(e^{X_i})) - |X_i + X_i + \sin(X_i)|))^{-3} \times |\frac{1}{n} \sum_{i=0}^{n-1} (-(|\cos(e^{X_i})| \times X_i))|$$

$$f_{51}(X) = \cos(-(\frac{1}{n-1} \sum_{i=0}^{n-2} (-((e^{-(X_{i+1})+X_{i+1}+X_{i+1}+X_i})^{C1_i})))) + \frac{1}{n} \sum_{i=0}^{n-1} (\sin(-(\frac{X_i \times C2_i + \frac{X_i}{C3_i} + X_i + C4_i}{3}))) - \sum_{i=0}^{n-2} (\tanh(-(X_{i+1}) - X_i + X_i + X_i + X_i))$$

where :

$$\begin{aligned} C1 &= [-3] \\ C2 &= [-2., 27.18281828] \\ C3 &= [5., 40.] \\ C4 &= [-0.6, 0.5] \end{aligned}$$

$$f_{52}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (e^{\frac{X_i - C1_i + \sin(X_i) + \sin(X_i) + \tanh(X_i)}{4}}) - \left| \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(|X_{i+1} + X_{i+1} + X_i + X_{i+1}|)) \right| \times \left| \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(|-(\frac{C2_i}{X_{i+1}})|)) \right|$$

where :

$$\begin{aligned} C1 &= [3.14159265, 0.4] \\ C2 &= [0.7] \end{aligned}$$

$$\begin{aligned} f_{53}(X) &= \sum_{i=0}^{n-1} \left(\frac{\sqrt{\cos(X_i - C1_i) \times -(X_i + C2_i)} + \log X_i \times X_i - X_i + C3_i \times X_i - C4_i + |X_i|}{2} \right. \\ &\quad \left. - \sin\left(\frac{-(\frac{C5_i}{X_i}) - (X_i - C6_i)}{\sqrt{-(X_i)} + e^{X_i \times X_i} + -(X_i \times X_i) + \frac{(X_i)^{C7_i}}{C8_i}}\right) - \tanh\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(-e^{\sqrt{\frac{X_i \times X_i + X_i \times X_{i+1} + -(X_{i+1}) + X_{i+1} + X_{i+1}}{4}}}\right)\right) \right) \end{aligned}$$

where :

$$\begin{aligned} C1 &= [0.27182818, 0.9] \\ C2 &= [3., -0.8] \\ C3 &= [-1., -0.7] \\ C4 &= [-0.4, 0.27182818] \\ C5 &= [3.14159265, -10.] \\ C6 &= [3., -1.] \\ C7 &= [2, 2] \\ C8 &= [-1., 7.] \end{aligned}$$

$$f_{54}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\cos\left(\sqrt{\frac{\sqrt{|e^{X_i}|} + |X_i - X_{i+1}| + |X_{i+1} + X_i| + \sqrt{\frac{X_i \times X_i}{X_i + X_{i+1}}} + -(|X_{i+1}|) \times X_i - C1_i \times \frac{X_{i+1}}{X_i}}}{4}}\right) - \cos\left(\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{e^{X_i + C2_i + X_i - C3_i + \sqrt{X_i + C4_i}}}) \right) \right)$$

where :

$$\begin{aligned} C1 &= [0.6] \\ C2 &= [-4., 1.] \\ C3 &= [0.31415927, -0.9] \\ C4 &= [0.6, -2.71828183] \end{aligned}$$

$$f_{55}(X) = -(\sum_{i=0}^{n-1} (|\frac{\tanh(X_i) \times C1_i - X_i + \tanh(\sqrt{X_i}) + X_i \times X_i \times X_i + C2_i + \tanh(X_i) - \sqrt{X_i}}{4}|))$$

where :

$$\begin{aligned} C1 &= [-0.27182818, 0.27182818] \\ C2 &= [-0.31415927, 1.] \end{aligned}$$

$$f_{56}(X) = \sqrt[e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(\sqrt{\sqrt{X_{i+1}} \times \frac{X_i}{X_{i+1}}}))}]{}$$

$$f_{57}(X) = \sum_{i=0}^{n-2} (|\sqrt{|\log X_{i+1}|}|) \times \frac{\sum_{i=0}^{n-2} (\sin(-(X_i - X_{i+1})))}{\frac{1}{n-1} \sum_{i=0}^{n-2} (\sin(-(X_i - X_{i+1})))}$$

$$f_{58}(X) = \sum_{i=0}^{n-2} (\sqrt{\frac{\sin(\sqrt{|X_{i+1}|} - \frac{X_{i+1}}{\sqrt{X_i}}) + \cos((\sqrt{\frac{X_{i+1}}{X_i}})^{C1_i})}{2}} - \sqrt{e^{\sin((X_i)^{C2_i} \times \frac{X_{i+1}}{X_i})} + \sin(e^{X_i} \times e^{X_{i+1}}) - e^{\sin(\frac{X_{i+1}}{X_i})}} \times e^{\frac{1}{n} \sum_{i=0}^{n-1} (|\tanh(|-(X_i) - (|X_i|)| \times \sqrt{\frac{X_i + X_i}{2}} - \frac{X_i}{C3_i} - X_i \times X_i)|)})$$

where :

$$\begin{aligned} C1 &= [3] \\ C2 &= [3] \\ C3 &= [-0.5, 4.] \end{aligned}$$

$$f_{59}(X) = |e^{\frac{1}{n} \sum_{i=0}^{n-1} (\frac{\sin((\frac{X_i + X_i}{2})^{C1_i})}{\sqrt{\tanh(X_i) - (X_i) \times \tanh(X_i)}} \times \log \sqrt{X_i} \times \sqrt{X_i} - |(X_i)^{C2_i}|)}|$$

where :

$$C1 = [2, 3]$$

$$C2 = [-2, 2]$$

$$f_{60}(X) = |-(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\cos(|\frac{-(X_i)+\sqrt{X_i}+C1_i \times X_{i+1}}+-(X_{i+1})|)} + |\sin(-(X_i) \times \sqrt{X_{i+1}})|))|$$

where :

$$C1 = [-3.14159265, 4., 9., 4., -0.5, -6., -0.6, 50., 31.41592654]$$

$$f_{61}(X) = \frac{\sin(\sum_{i=0}^{n-1} (\sqrt{|\sqrt{X_i}|+(e^{X_i})^{C1_i}}))}{\sum_{i=0}^{n-1} (-(\cos(X_i + C2_i)) + \sqrt{\tanh(\sqrt{X_i})} + e^{\tanh(X_i)} - e^{X_i} + X_i \times X_i - e^{\frac{\cos(\frac{X_i}{C3_i})}{\frac{X_i}{C4_i} + (X_i)^{C5_i} + X_i + C6_i}})}$$

where :

$$C1 = [3, -2, -3, 3, -3, 2, 3, -2, 2, -2]$$

$$C2 = [-0.5, -0.27182818, 0.5, -0.8, 0.7, 1., 0.5, 0.3, -0.8, -0.1]$$

$$C3 = [3.14159265, -3.14159265, -2.71828183, 4., -10., 50., 10., 8., -0.5, -1.]$$

$$C4 = [-0.9, 0.6, -10., 0.8, 3., 3., 5., 2., 5., -0.8]$$

$$C5 = [-2, -3, -3, 2, -2, 2, 2, -2, 2, 2]$$

$$C6 = [-3.14159265, 3., -0.7, -0.3, 0.6, -2.71828183, 2., 4., -0.8, 3.14159265]$$

$$f_{62}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos((\frac{X_{i+1}}{X_i})^{C1_i} \times e^{X_{i+1}} - \sqrt{X_{i+1}} + |X_{i+1}| \times X_i + X_i \times -(X_{i+1}) + \sqrt{X_{i+1}} + \frac{e^{X_{i+1}} \times |X_i|}{|X_{i+1}| + |X_i|} \times \frac{|e^{\sqrt{X_{i+1}}}|}{(|X_{i+1}| \times |X_i|)^{C2_i}})) \times \frac{1}{n} \sum_{i=0}^{n-1} (|X_i| - \frac{(X_i)^{C3_i}}{\sqrt{X_i}}) \times \sin(\sum_{i=0}^{n-1} (-(\frac{X_i}{C4_i} + \frac{X_i}{C5_i} + \sqrt{X_i}) + -(X_i) - \sqrt{X_i \times X_i}))$$

where :

$$\begin{aligned}
C1 &= [3, -2, -3, 3, -2, -2, 3, -3, -3] \\
C2 &= [-2, 3, -2, -3, 2, 2, -2, 3, 3] \\
C3 &= [-3, -3, 3, -3, -2, -3, 2, 3, -3, -2] \\
C4 &= [0.8, 8., 9., 7., 0.6, 0.8, -4., -5., -8., -8.] \\
C5 &= [-0.5, 0.4, -0.2, -2., 3., -0.8, -2., 2., 5., 0.8]
\end{aligned}$$

$$f_{63}(X) = |\sum_{i=0}^{n-2} ((|X_i| + \frac{X_i + X_{i+1}}{2})^{C1_i})| - \cos(|\sum_{i=0}^{n-2} (e^{X_{i+1}}) + \frac{1}{n} \sum_{i=0}^{n-1} (-(X_i))|) \times \sqrt{\sum_{i=0}^{n-2} ((\frac{e^{X_i}}{\frac{e^{X_{i+1}}}{e^{X_i}}} \times -(X_{i+1}))^{C2_i})}$$

where :

$$\begin{aligned}
C1 &= [-2, -2, -2, -3, -3, 3, 3, -3, 2] \\
C2 &= [3, 2, -2, -2, 3, -3, -2, 2, -2]
\end{aligned}$$

18

$$\begin{aligned}
f_{64}(X) &= \frac{1}{n-1} \sum_{i=0}^{n-2} \left(- \left(\frac{\log X_i \times (X_{i+1})^{C1_i} + \tanh(X_{i+1})}{\sqrt{|\tanh(X_{i+1})|} \times \frac{e^{X_{i+1}}}{\log \sqrt{X_i}}} \right) \right) \\
&+ \sum_{i=0}^{n-2} \left(\frac{\sqrt{\log X_i \times (X_{i+1})^{C2_i} + -(X_{i+1})} + (\sin(X_{i+1}) + |X_i|)^{C3_i}}{\cos(X_i - X_{i+1} + X_{i+1} - C4_i - \frac{C5_i + X_i + e^{X_{i+1}}}{2})} \times \sqrt{(|X_i|)^{C6_i} - -((-X_i))^{C7_i}} \right) \times \sin\left(\frac{1}{n} \sum_{i=0}^{n-1} ((-(X_i \times X_i) \times |X_i + X_i - -(X_i)|)^{C8_i} + \frac{e^{|\frac{X_i}{C9_i}|} + |(|X_i \times X_i|)^{C10_i}|}{2})\right)
\end{aligned}$$

where :

$$\begin{aligned}
C1 &= [2, 3, -3, 3, -2, -2, -2, 3, -3] \\
C2 &= [2, 3, -3, 3, -2, -2, -2, 3, -3] \\
C3 &= [2, -2, 3, -3, -2, 3, 3, -2, 2] \\
C4 &= [0.2, 2., -0.8, -2.71828183, -3., 0.31415927, 0.2, 2.71828183, 0.8] \\
C5 &= [-3.14159265, 0.7, -0.5, 0.8, 1., 0.27182818, 5., -0.2, 0.4] \\
C6 &= [2, -2, -3, 2, 3, -3, 2, -2, -3] \\
C7 &= [2, -2, 3, 2, -2, -2, -2, 3, 2] \\
C8 &= [3, 2, -3, -3, -2, -3, -3, 2, 3, 2] \\
C9 &= [-2., -30., 9., 40., 0.7, 3.14159265, -9., 4., -40., 5.] \\
C10 &= [-2, -3, -3, 3, 3, -2, 2, -3, 2, 3]
\end{aligned}$$

$$f_{65}(X) = \frac{1}{n} \sum_{i=0}^{n-1} \left(\cos\left(\frac{e^{\frac{X_i}{C1_i}}}{|X_i|}\right) \right) \times \frac{1}{n} \sum_{i=0}^{n-1} \left(\sqrt{X_i} - X_i + X_i \times \frac{X_i - C2_i + (X_i)^{C3_i}}{2} + \frac{X_i}{C4_i} \right) - \sum_{i=0}^{n-2} \left(-\left(e^{\frac{C5_i + X_i}{2}} \times e^{X_i}\right) \right)$$

where :

$$\begin{aligned} C1 &= [-10., 3., -6., 3., -10.] \\ C2 &= [5.000000000e-01, 6.000000000e+01, 2.000000000e-01, 2.71828183e+03, -9.000000000e-01] \\ C3 &= [2, -2, -2, -2, -3] \\ C4 &= [-0.7, 2.71828183, 2.71828183, 20., -1.] \\ C5 &= [-0.8, -0.31415927, -2., 0.8] \end{aligned}$$

$$f_{66}(X) = \sum_{i=0}^{n-1} \left(-(X_i + X_i) \right) - \sum_{i=0}^{n-2} \left((|X_i - X_{i+1}|)^{C1_i} + (X_{i+1} - X_i)^{C2_i} \times \frac{\sqrt{\frac{X_{i+1} + X_i}{2}}}{|X_{i+1} - X_i|} \right) - \sum_{i=0}^{n-1} \left(-\left(\frac{(|X_i \times C3_i|)^{C4_i} + e^{X_i \times -(|X_i|)}}{2}\right) \right)$$

where :

$$\begin{aligned} C1 &= [-2, -3, 3, -3, -2, 2, -2, -2, -3] \\ C2 &= [3, 3, 3, 2, -2, 2, -2, -3, -3] \\ C3 &= [-27.18281828, 2., 8., -30., -6., 10., -1., 5., -8., 0.5] \\ C4 &= [2, 2, -3, -3, 2, -2, 2, 2, -2] \end{aligned}$$

$$f_{67}(X) = \sin\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sqrt{\frac{X_{i+1} - X_i + |X_{i+1}| \times e^{X_{i+1}} - \sqrt{X_i} + (X_{i+1} - X_i - X_{i+1})^{C1_i}}{2}} \right) \right) - \tanh\left(\frac{1}{n} \sum_{i=0}^{n-1} (X_i + X_i)\right)$$

where :

$$C1 = [-3]$$

$$f_{68}(X) = \sin\left(\sum_{i=0}^{n-1} (X_i - C1_i + X_i + C2_i \times \sqrt{X_i})\right) + \log \sum_{i=0}^{n-2} \left(\frac{\sqrt{-(X_{i+1})} + e^{-(X_i)}}{2} \right)$$

where :

$$C1 = [0.8, -2.]$$

$$C2 = [-0.31415927, -2.]$$

$$f_{69}(X) = \frac{\sum_{i=0}^{n-2} (\sin(\frac{e^{|X_i|} - (\sqrt{X_i})}{e^{\frac{X_i - X_{i+1} + (-X_{i+1})}{X_{i+1} + X_i + C1_i} \times (X_i)^{C2_i}}}))}{\sum_{i=0}^{n-2} (\tanh((\frac{|X_{i+1}| \times e^{X_{i+1}}}{|X_i| + e^{X_i}}) C3_i) + e^{\frac{\sqrt{-(X_{i+1} \times X_i)}}{\sqrt{\log X_i} \times |\frac{X_{i+1}}{X_i}|}})} - e^{\frac{1}{n} \sum_{i=0}^{n-1} (\sin(\sqrt{-(|X_i - C4_i + |X_i|)}))}$$

where :

$$C1 = [0.7, -0.1, 2.71828183, -2.]$$

$$C2 = [-2, -2, 2, -2]$$

$$C3 = [2, 3, 3, 3]$$

$$C4 = [3.14159265, 0.9, -1., -1., -0.27182818]$$

20

$$f_{70}(X) = e^{\cos(\frac{1}{n} \sum_{i=0}^{n-1} (|\frac{\sqrt{X_i} + (-X_i)}{-(|X_i|)} - (\sqrt{\frac{X_i + X_i + X_i + X_i}{4}})|))}$$

$$f_{71}(X) = |\frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(-(X_{i+1}) + (X_i)^{C1_i} + \frac{X_{i+1} - X_i}{X_{i+1} - X_i} + (X_i)^{C2_i} + X_{i+1} - X_i))| - \sqrt{\sum_{i=0}^{n-1} (e^{\sqrt{|X_i|}} \times \sqrt{\tanh(X_i \times X_i)})}$$

where :

$$C1 = [-2, 3, -2, -2]$$

$$C2 = [-3, -3, -3, 3]$$

$$f_{72}(X) = \sin(\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{|X_i + X_{i+1} + X_{i+1} + X_{i+1}|})) \times |\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{\sin(X_i - C1_i)})|$$

where :

$$C1 = [4., 0.9, 1., -0.3, 0.9]$$

$$f_{73}(X) = \cos\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sqrt{\frac{X_i}{X_{i+1}} + |X_{i+1}| \times \sqrt{X_i} + \frac{X_i}{X_{i+1}}} + \right.\right. \\ \left.\left. - (|(C1_i + X_{i+1})^{C2_i}|)\right) - \sum_{i=0}^{n-1} (|\sin(\sqrt{X_i} + X_i - C3_i + X_i + C4_i \times (X_i + C5_i)^{C6_i})|) + \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\log \frac{X_{i+1} \times X_i - \frac{X_i}{X_{i+1}} + X_{i+1} - C7_i + (X_i)^{C8_i}}{||X_i| + \sqrt{X_i}|}\right)\right)$$

where :

$$\begin{aligned} C1 &= [2.] \\ C2 &= [-2] \\ C3 &= [0.7, -2.71828183] \\ C4 &= [0.9, -5.] \\ C5 &= [-1., -0.2] \\ C6 &= [-3, 3] \\ C7 &= [-4.] \\ C8 &= [-2] \end{aligned}$$

$$f_{74}(X) = -\left(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\cos(X_i - X_{i+1}) + \sqrt{|X_{i+1}|}}) \times \frac{1}{n-1} \sum_{i=0}^{n-2} (e^{-(|\frac{X_{i+1}}{X_i}|)})\right)$$

$$f_{75}(X) = \frac{\sum_{i=0}^{n-1} \left(\frac{|\cos(X_i - C1_i - X_i \times X_i)| + |\sqrt{\tanh(-(X_i))}|}{2}\right)}{\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(|\sqrt{\frac{X_i + C2_i}{X_{i+1}}}|))} + \sin\left(\sum_{i=0}^{n-2} (-(|(X_{i+1} \times X_i)^{C3_i} + (X_i)^{C4_i} + X_{i+1} - X_i|))\right)$$

where :

$$\begin{aligned} C1 &= [2.71828183, -0.31415927, -0.4, 0.8, 0.1, 0.7, -0.9, 1., 0.9, -2.] \\ C2 &= [0.5, -0.6, 0.31415927, 0.4, 0.31415927, -4., -0.2, -1., 2.] \\ C3 &= [2, 3, 2, -2, -2, -2, -3, -3] \\ C4 &= [-3, 2, 2, 3, 2, -2, 3, -3, 3] \end{aligned}$$

$$f_{76}(X) = \left| \sum_{i=0}^{n-1} \left(\frac{-(|X_i|) + \log X_i - C1_i + \frac{-(X_i)}{X_i \times X_i}}{3} \right) \right| - \sqrt{\sum_{i=0}^{n-2} \left(\log \frac{\sqrt{X_{i+1}} + \sqrt{X_i} + (X_{i+1})^{C2_i} + X_i + X_i}{4} \right)}$$

where :

$$C1 = [-0.2, -0.7, 0.1, 0.8, 0.27182818, -4., 5., -0.9, 0.8, 0.7]$$

$$C2 = [2, 3, 3, 3, -2, -2, -3, -2, -3]$$

$$f_{77}(X) = \left| \frac{1}{n-1} \sum_{i=0}^{n-2} (\sin(X_{i+1}) \times |X_{i+1}|) \right| + \left| \sum_{i=0}^{n-1} ((-(X_i))^{C1_i}) \right|$$

where :

$$C1 = [3, -3, -3, 3, -2, -2, -2, -3, 3, -2]$$

$$f_{78}(X) = \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} ((|X_{i+1}|)^{C1_i})}{\log \sum_{i=0}^{n-2} \left(- \left(e^{\frac{-(X_{i+1})^{C2_i} + \frac{X_{i+1}}{X_i} \times |X_i|}{2}} \right) \right)} + \sqrt{\sum_{i=0}^{n-2} (-(X_{i+1}) \times e^{-(X_{i+1})} + X_i - X_{i+1} \times -(X_{i+1}) \times X_{i+1} + X_i + X_i - X_{i+1} \times X_{i+1} \times X_{i+1})}$$

where :

$$C1 = [-2, 2, 2, -2, 3, 3, 3, 2, 2]$$

$$C2 = [-3, -2, 3, 3, 3, -3, 3, -2, -3]$$

$$f_{79}(X) = \sum_{i=0}^{n-2} ((|X_i + X_i|)^{C1_i}) - \frac{1}{n-1} \sum_{i=0}^{n-2} (-(e^{|X_i + X_i|}) \times (|X_i + X_i|)^{C2_i}) + \frac{1}{n} \sum_{i=0}^{n-1} ((X_i)^{C3_i}) - \frac{1}{n-1} \sum_{i=0}^{n-2} (-(e^{|C4_i - X_i|}))$$

where :

$$C1 = [-3, -3, -3, 2, 2, 2, 2, 3, -3]$$

$$C2 = [-3, -3, -3, 2, 2, 2, 2, 3, -3]$$

$$C3 = [-2, -3, -3, 2, 2, -2, -2, -2, 2, 3]$$

$$C4 = [-3., -5., -0.1, 0.9, 0.7, -0.4, 2.71828183, 2.71828183, -0.4]$$

$$f_{80}(X) = \sum_{i=0}^{n-2} \left(\frac{X_i - C1_i}{\frac{|\tanh(-(X_{i+1}) - \sqrt{X_i} + -(X_i - C2_i + |\frac{X_i + X_{i+1}}{2}|))| - X_{i+1}}{\cos(X_{i+1}) \times (X_i)^{C3_i}}} \right) + \sum_{i=0}^{n-1} ((X_i)^{C7_i}) \times \sum_{i=0}^{n-1} (X_i + C8_i)$$

$$\frac{\cos(X_{i+1}) \times (X_i)^{C3_i}}{(X_{i+1})^{C4_i} \times \frac{X_i - C5_i}{\cos(X_{i+1}) \times (X_i)^{C6_i}}}$$

where :

$$\begin{aligned} C1 &= [-7.00000000e + 02, 5.00000000e + 01, -6.00000000e + 03, 3.14159265e + 00, 5.00000000e + 02, 7.00000000e - 01, -7.00000000e + 02, 2.00000000e + 02, 2.00000000e + 00] \\ C2 &= [-7.00000000e + 02, 5.00000000e + 01, -6.00000000e + 03, 3.14159265e + 00, 5.00000000e + 02, 7.00000000e - 01, -7.00000000e + 02, 2.00000000e + 02, 2.00000000e + 00] \\ C3 &= [-2, 3, -3, -3, 3, 3, 3, -2, -3] \\ C4 &= [3, -2, -3, -3, -2, 2, 3, -3, 2] \\ C5 &= [-7.00000000e + 02, 5.00000000e + 01, -6.00000000e + 03, 3.14159265e + 00, 5.00000000e + 02, 7.00000000e - 01, -7.00000000e + 02, 2.00000000e + 02, 2.00000000e + 00] \\ C6 &= [-2, 3, -3, -3, 3, 3, 3, -2, -3] \\ C7 &= [2, -3, 2, -3, 3, -2, 3, 2, 2] \\ C8 &= [-0.31415927, 0.4, 0.3, -0.4, 0.4, -0.27182818, 2., 0.1, -0.9, 3.14159265] \end{aligned}$$

23

$$f_{81}(X) = \left(\sum_{i=0}^{n-1} (\log \sqrt{X_i} - (X_i) - C1_i \times X_i \times X_i - C2_i \times X_i - C3_i + X_i + C4_i \times e^{\frac{X_i + X_i}{2}}) \right)^{-3}$$

$$+ \frac{\frac{1}{n} \sum_{i=0}^{n-1} (| -((X_i)^{C5_i}) | \times \tanh(e^{X_i}) - X_i + X_i \times (X_i)^{C6_i} - \cos(-(X_i + X_i) \times \frac{\sqrt{X_i}}{|X_i|}))}{\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{\frac{\sqrt{e^{X_{i+1}}}}{\cos(X_i)}} + e^{|X_{i+1}|} \times \sqrt{X_{i+1}} \times -(X_{i+1}))}$$

where :

$$\begin{aligned} C1 &= [-40., -2.] \\ C2 &= [-0.27182818, -2.71828183] \\ C3 &= [2., -4.] \\ C4 &= [-5., 0.6] \\ C6 &= [-2, 3] \\ C7 &= [2, 2] \end{aligned}$$

$$f_{82}(X) = \cos\left(\sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (X_i \times X_i + -(C1_i - X_i \times X_i + X_i))}\right)$$

where :

$$C1 = [-0.1, 0.6, -0.1, 3.14159265, -0.31415927, -0.5, 2.71828183, -0.8, -0.31415927, -3.]$$

$$f_{83}(X) = \sqrt{\sin\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{e^{\frac{X_i + C1_i + X_i + C2_i}{2}}}{|X_i| + C3_i \times X_i + \sqrt{X_i}} \times (-e^{-(X_i)})^{C5_i} \right) \right)} \times \sqrt{(-(X_i) \times \sqrt{e^{X_i}})^{C6_i} \times \sqrt{(e^{X_i})^{C7_i}} + \sqrt{\frac{X_i}{X_i - C8_i}}}$$

where :

$$\begin{aligned} C1 &= [-0.5, -5.] \\ C2 &= [0.31415927, 0.2] \\ C3 &= [-30., 7.] \\ C4 &= [0.7, -0.1] \\ C5 &= [-2, 2] \\ C6 &= [-3, 2] \\ C7 &= [-2, -3] \\ C8 &= [2., 0.5] \end{aligned}$$

$$f_{84}(X) = \left| \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{\sqrt{\cos(-(X_{i+1} + X_{i+1}) + (X_i)^{C1_i}))}}{\left(\sqrt{\frac{\log X_{i+1}}{e^{X_i}} \times \frac{X_{i+1}}{X_i} + -(X_i)} \right)^{C2_i} + e^{-\left(\sqrt{\frac{\sin(X_{i+1})}{\sqrt{X_{i+1}}}} \right)} + \sqrt{|-(X_{i+1})| + e^{\sqrt{X_{i+1}}}} + \sqrt{\tanh(e^{X_{i+1} \times C3_i} \times |X_{i+1}| \times X_{i+1} + C4_i)} + \sqrt{e^{\tanh(X_{i+1})}} \times \sqrt{\cos\left(\frac{\sqrt{(X_{i+1} + X_{i+1})^{C5_i}}}{X_{i+1}}\right)}} \right) \right|$$

4

where :

$$\begin{aligned} C1 &= [2] \\ C2 &= [2] \\ C3 &= [-20.] \\ C4 &= [-3.] \\ C5 &= [2] \end{aligned}$$

$$f_{85}(X) = \log \sum_{i=0}^{n-2} \left(-\left(\frac{C1_i}{X_i} + C2_i + X_{i+1} - e^{X_i + X_{i+1}} + e^{\frac{X_i + X_i}{2}} - \frac{X_{i+1} \times X_{i+1}}{X_{i+1} - X_i} \right) \right) \times \sum_{i=0}^{n-2} \left(\sqrt{(-(X_{i+1}))^{C3_i}} \right)$$

where :

$$\begin{aligned} C1 &= [3.14159265] \\ C2 &= [0.4] \\ C3 &= [2] \end{aligned}$$

$$f_{86}(X) = \sum_{i=0}^{n-1} \left(\frac{\sqrt{-(X_i)} \times \frac{\frac{X_i}{C1_i}}{X_i \times X_i} + \frac{\sqrt{X_i} + e^{X_i}}{|\frac{X_i}{C2_i}|}}{2} \right) - \sum_{i=0}^{n-1} \left(\frac{\sqrt{(e^{X_i})^{C3_i}}}{\frac{\log X_i + C4_i}{(|X_i|)^{C5_i}}} \right)$$

where :

$$\begin{aligned} C1 &= [-3.14159265, -3.14159265] \\ C2 &= [6., 50.] \\ C3 &= [2, -2] \\ C4 &= [0.4, 0.4] \\ C5 &= [3, -2] \end{aligned}$$

$$f_{87}(X) = \left(\sum_{i=0}^{n-2} \left(\sqrt{-(\log X_i) + e^{X_{i+1}} + X_i \times X_i - (X_{i+1}) \times \tanh(X_i) + \frac{X_i}{X_{i+1}} - \log X_i} \right) \right)^{-3}$$

$$f_{88}(X) = \sum_{i=0}^{n-1} \left(\left| \log \frac{X_i + C1_i + (X_i)^{C2_i}}{2} \right| \right) \times \log \sum_{i=0}^{n-2} \left(\sqrt{-(X_{i+1})} - |X_i + X_i| \right)$$

where :

$$\begin{aligned} C1 &= [-0.7, 5., -0.31415927, -2.71828183, 0.9] \\ C2 &= [-3, -3, -2, 3, 2] \end{aligned}$$

$$f_{89}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{|-(X_i \times X_{i+1}) \times \frac{\sqrt{X_{i+1}} + \tanh(X_i) + \cos(X_{i+1}) + X_{i+1} - X_i}{4}|}{(-(\sqrt{-(X_{i+1})}))^{C1_i}} \right) + \frac{\sum_{i=0}^{n-2} (\sqrt{\cos(X_i \times X_{i+1} + X_i \times X_{i+1}))}}{\frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{\sqrt{\tanh(X_i)}}{\sqrt{e^{X_i}}} - \tanh((X_i)^{C2_i} - X_i \times X_i) \right)}$$

where :

$$\begin{aligned} C1 &= [-2, 2, 2, -3] \\ C2 &= [-2, 2, -3, -2, -2] \end{aligned}$$

$$f_{90}(X) = -(\sum_{i=0}^{n-1} ((\log \sqrt{X_i} \times -(X_i))^{C1_i})) - \sum_{i=0}^{n-2} (|\tanh(-(\sqrt{\frac{X_{i+1} + X_{i+1}}{2}}))|)$$

where :

$$C1 = [2, 3]$$

$$f_{91}(X) = \sum_{i=0}^{n-2} (\cos(\frac{|\frac{X_i \times X_{i+1}}{C1_i}|}{\sqrt{e^{X_i \times X_i}}} + e^{\sqrt{\frac{X_i}{X_{i+1}}}} - ((X_i)^{C2_i}) \times |C3_i \times X_{i+1}|}) + -(\frac{\sqrt{e^{\tanh(X_{i+1})}}}{|e^{X_i \times C4_i}|} + \frac{\cos(|e^{X_i}|)}{\sqrt{\cos(X_i) - e^{X_i}}}))$$

where :

$$\begin{aligned} C1 &= [0.7, 27.18281828, -1., -3.14159265] \\ C2 &= [-3, 2, -2, -2] \\ C3 &= [10., 1., -7., 6.] \\ C4 &= [-3.14159265, 1., -3.14159265, -0.7] \end{aligned}$$

$$f_{92}(X) = \log \frac{1}{n} \sum_{i=0}^{n-1} (e^{-(\frac{X_i}{C1_i})}) - \sum_{i=0}^{n-2} (\frac{\sin(\frac{X_{i+1} + X_{i+1} + X_i}{3} - e^{X_{i+1}})}{-(\log(X_{i+1}))^{C2_i}})$$

where :

$$\begin{aligned} C1 &= [7., 8., -31.41592654, 40., -3., 0.8, -40., -6., -30., 4.] \\ C2 &= [-3, -2, -2, -3, -3, 2, -3, 2, -3] \end{aligned}$$

$$f_{93}(X) = \log \sum_{i=0}^{n-2} \left(- \left(\frac{e^{\left(\frac{X_i + X_{i+1} + X_{i+1} + X_i}{X_i + X_{i+1}} \right)^{C1_i}}}{\sqrt{|\sqrt{|X_{i+1}}|}} \right) \right) - \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\log \frac{\frac{|-(X_{i+1} + X_i)|}{(|X_i| + \frac{X_i}{X_{i+1}})^{C2_i}} + \frac{|(X_i)^{C3_i}|}{\sqrt{X_i \times -(X_{i+1})}} - |e^{|X_i|}|}{2} \right) \times \frac{1}{n} \sum_{i=0}^{n-1} \left(e^{\cos\left(\frac{-(X_i)^{C4_i}}{(X_i)^{C5_i} - X_i + C6_i}\right) \times \log\left(-(X_i) - \frac{X_i + X_i + X_i}{3}\right)^{C7_i}} \right)$$

where :

$$\begin{aligned} C1 &= [-2, -3, -3, -3] \\ C2 &= [-3, 3, -3, 3] \\ C3 &= [-2, 2, -3, 2] \\ C4 &= [3, -2, -3, -3, 2] \\ C5 &= [-2, -2, 3, 3, -3] \\ C6 &= [314.15926536, 30., -6., 700., 0.8] \\ C7 &= [-2, 3, 2, 2, -3] \end{aligned}$$

$$f_{94}(X) = \sum_{i=0}^{n-1} \left(X_i - \frac{\frac{X_i + C1_i}{C2_i \times X_i} + e^{X_i} \times X_i + C3_i + |\sqrt{|X_i|}|}{2} \right. \\ \left. \times |X_i| \right) - \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\log |X_i| + \cos(|X_i|) \times |\tanh(X_i) \times (X_i)^{C4_i}| \right) - \left| \sum_{i=0}^{n-1} \left(\tanh(X_i - C5_i) - \frac{\frac{X_i + C6_i}{e^{X_i}} + e^{X_i} \times X_i + C7_i + |\sqrt{|X_i|}|}{2} \times |X_i| \right) \right|$$

where :

$$\begin{aligned} C1 &= [0.27182818, -0.3, -0.1, -4., -0.5, -0.5, -4., -2.71828183, -5., 0.4] \\ C2 &= [9., 0.8, -27.18281828, -50., 20., 10., 1., 1., -0.7, -1.] \\ C3 &= [0.7, -0.3, 0.31415927, 0.8, 0.4, 1., -0.31415927, 0.5, -1., 0.6] \\ C4 &= [3, -3, -2, -2, 3, 2, 2, 3, -3] \\ C5 &= [3.14159265, -0.6, 3., 0.31415927, 0.27182818, -0.7, 2.71828183, 0.5, 0.1, 5.] \\ C6 &= [0.27182818, -0.3, -0.1, -4., -0.5, -0.5, -4., -2.71828183, -5., 0.4] \\ C7 &= [0.7, -0.3, 0.31415927, 0.8, 0.4, 1., -0.31415927, 0.5, -1., 0.6] \end{aligned}$$

$$f_{95}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\cos\left(\left(\frac{-(X_{i+1}) + e^{X_{i+1}} + |X_{i+1}|}{3}\right)^{C1_i}\right) \right) \times \frac{\frac{1}{n} \sum_{i=0}^{n-1} \left(\sqrt{\left| \frac{(X_i)^{C2_i} + X_i + \sqrt{-(\frac{X_i}{C3_i} \times \tanh(X_i \times \frac{X_i}{C4_i}))} + -(X_i)}{4} \right|} \right)}{\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{|X_{i+1}|} + -(X_i + X_{i+1}) - \sqrt{X_i})}$$

where :

$$\begin{aligned}
C1 &= [-2, -3, 3, -3, 2, -3, -2, 3, 2] \\
C2 &= [2, -3, -2, -2, 3, -2, -2, 3, -3, 3] \\
C3 &= [-20., -2.71828183, -20., 0.9, 5., -0.5, -3.14159265, 40., 0.6, -30.] \\
C4 &= [-5., -31.41592654, 31.41592654, 31.41592654, -5., -31.41592654, -20., 6., -30., -50.]
\end{aligned}$$

$$f_{96}(X) = \sum_{i=0}^{n-2} (e^{\cos(\frac{X_i}{X_{i+1}} \times X_{i+1} \times X_i)}) \times (\sum_{i=0}^{n-1} (\frac{C1_i}{X_i} + \frac{X_i}{C2_i}))^{-2} - \sin((\sum_{i=0}^{n-1} (C3_i + \frac{X_i}{C4_i}))^{-2} - \sqrt{\sum_{i=0}^{n-1} (|\sqrt{|\sqrt{X_i + C5_i}|} \times |X_i|)})$$

where :

$$\begin{aligned}
C1 &= [31.41592654, -3., -40., -2.71828183, 20., 20., 0.5, 6., 6., -0.9] \\
C2 &= [5., 9., -10., 0.8, 0.8, -30., 1., 27.18281828, -1., 0.7] \\
C4 &= [31.41592654, -3., -40., -2.71828183, 20., 20., 0.5, 6., 6., -0.9] \\
C5 &= [5., 9., -10., 0.8, 0.8, -30., 1., 27.18281828, -1., 0.7] \\
C7 &= [0.6, 0.4, 1., 2.71828183, -0.27182818, -0.5, -0.31415927, 0.9, -1., 0.1]
\end{aligned}$$

28

$$f_{97}(X) = \tanh(\sum_{i=0}^{n-2} (\frac{X_i + X_i}{2}) + \sum_{i=0}^{n-1} (X_i + X_i + |X_i|))$$

$$f_{98}(X) = -((e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(X_{i+1} - X_i - X_i + X_i + X_{i+1} - X_i))})^3)$$

$$f_{99}(X) = \tanh(\frac{1}{n} \sum_{i=0}^{n-1} (-(|X_i| - \sqrt{\frac{X_i}{C1_i}}))) - \sum_{i=0}^{n-2} (\sin((e^{X_{i+1}})^{C2_i})) - \sum_{i=0}^{n-1} (\tanh(\frac{X_i - C3_i + \frac{X_i}{C4_i} + -(\frac{X_i}{C5_i})}{2}))$$

where :

$$\begin{aligned}
C1 &= [2., 0.8] \\
C2 &= [2] \\
C3 &= [3.14159265, 0.1] \\
C4 &= [10., -2.71828183] \\
C5 &= [0.6, -0.6]
\end{aligned}$$

$$f_{100}(X) = (\frac{1}{n} \sum_{i=0}^{n-1} (\tanh(X_i \times X_i + e^{X_i})) - \log \sum_{i=0}^{n-2} (-(\frac{|X_i| + X_i \times X_i}{2})))^2$$

$$f_{101}(X) = e^{\sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (||\frac{\sqrt{X_i} + |X_i|}{2}|| \times \sqrt{|\sqrt{X_i}|})}}$$

$$f_{102}(X) = \sum_{i=0}^{n-2} (\log | \frac{(-(X_i))^{C1_i} - e^{X_i \times X_{i+1}} - \frac{X_{i+1} \times X_{i+1} + \frac{X_i}{X_{i+1}}}{e^{-(X_{i+1})}} - \frac{e^{|X_i| \times |X_{i+1}|} + \frac{(e^{X_i})^{C2_i}}{X_i \times X_{i+1} + |X_i|} + (e^{X_{i+1}})^{C3_i} - (|X_{i+1}|)^{C4_i}}{3}}{-(|e^{-(X_{i+1})}|) + (\frac{\frac{-(X_i)}{X_{i+1} + X_i}}{|X_{i+1}| \times X_{i+1} \times X_i})^{C5_i}}} |)$$

where :

$$\begin{aligned} C1 &= [-3] \\ C2 &= [3] \\ C3 &= [-2] \\ C4 &= [2] \\ C5 &= [2] \end{aligned}$$

$$f_{103}(X) = |\frac{1}{n-1} \sum_{i=0}^{n-2} (|e^{\cos(X_{i+1}) + X_i - C1_i + \cos(X_i) - |X_i| + \sqrt{X_i} \times \log X_{i+1}})| + \sqrt{\sum_{i=0}^{n-2} (-(|\cos(X_i + X_{i+1} + X_{i+1} + X_i) \times \log \frac{X_i}{X_{i+1}}|))}}$$

where :

$$C1 = [-0.27182818]$$

$$f_{104}(X) = (\log \frac{1}{n-1} \sum_{i=0}^{n-2} (|e^{|X_{i+1}| \times \frac{X_i}{X_{i+1}}} + \frac{\sqrt{X_i}}{X_{i+1}} \times C1_i - X_i - \sqrt{X_i} \times \sqrt{-(|X_i|)} + -(\frac{X_{i+1}}{X_i}) \times \sqrt{X_{i+1} \times X_i} - |\sqrt{-(X_i)}|))^{-2}$$

where :

$$C1 = [0.5, -2.71828183, 0.31415927, -0.7]$$

$$f_{105}(X) = \left(\sum_{i=0}^{n-2} \left(\log \frac{X_{i+1}}{X_i} + X_i + X_i \right) + \sum_{i=0}^{n-2} \left(e^{\sin(X_i - X_{i+1}) \times -(X_{i+1}) \times X_i - X_{i+1}} \right) \right)^2$$

$$f_{106}(X) = \sum_{i=0}^{n-1} \left(\frac{\frac{\cos(X_i)}{C1_i + X_i} + \log \sqrt{X_i}}{2} \times \sin(X_i) - \frac{X_i}{C2_i} \times \frac{\frac{C3_i}{X_i}}{\frac{X_i + X_i}{2}} \right) \times \sum_{i=0}^{n-1} \left(-((X_i + X_i)^{C4_i} - e^{X_i} + \cos(X_i)) \right) + \sum_{i=0}^{n-1} \left(\frac{\cos\left(\frac{X_i - C5_i + (X_i)^{C6_i}}{2}\right)}{\tanh(e^{X_i + C7_i})} \right) \times \sum_{i=0}^{n-2} \left(\frac{e^{-(X_{i+1} + X_{i+1})} + \sqrt{\frac{\tanh(X_{i+1})}{\frac{X_{i+1}}{X_i}}}}{2} \right)$$

where :

$$\begin{aligned} C1 &= [0.27182818, 4.] \\ C2 &= [9., 0.7] \\ C3 &= [-27.18281828, 6.] \\ C4 &= [3, 2] \\ C5 &= [0.4, 4.] \\ C6 &= [-3, 2] \\ C7 &= [-0.8, 3.14159265] \end{aligned}$$

$$f_{107}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{\sin\left(\frac{\sqrt{X_{i+1}}}{\sqrt{X_i}}\right)}{(C1_i + X_i)^{C2_i} \times \tanh(X_i) + (X_{i+1})^{C3_i}} \right)$$

where :

$$\begin{aligned} C1 &= [0.4, -0.8, 2., -0.27182818] \\ C2 &= [-3, -2, -3, 3] \\ C3 &= [-2, -3, 3, -2] \end{aligned}$$

$$f_{108}(X) = \sum_{i=0}^{n-1} \left(e^{\sqrt{\sqrt{|\sin(X_i \times X_i)|} + \left| \frac{\sin(X_i - C1_i)}{\sqrt{X_i - C2_i}} \right|}} \right)$$

where :

$$C1 = [0.2, 3.14159265, 5., 5., -0.6]$$

$$C2 = [-3.14159265, -4., -0.9, -2.71828183, 2.71828183]$$

$$f_{109}(X) = \frac{1}{n} \sum_{i=0}^{n-1} ((-(\cos(-(X_i + X_i + X_i))))^{C1_i}) + -(|\sum_{i=0}^{n-1} (\sin(-(\frac{X_i + X_i}{2} \times X_i \times X_i)))|)$$

where :

$$C1 = [3, 3, -2, -2, 2]$$

$$f_{110}(X) = \sqrt{\sum_{i=0}^{n-2} (\sqrt{\frac{\sqrt{|X_i|}}{X_i + X_{i+1} - X_{i+1} - X_i}} \times (X_i)^{C1_i} \times \sqrt{X_{i+1}} - e^{X_i})} + \sqrt{\sum_{i=0}^{n-2} (X_{i+1} + (X_i)^{C2_i} \times \frac{\sqrt{X_{i+1}}}{e^{X_i}})}$$

where :

$$C1 = [2, -3, -3, 2, 2, 2, -2, 2, -2]$$

$$C2 = [2, -3, -3, 2, 2, 2, -2, 2, -2]$$

$$f_{111}(X) = \log \sum_{i=0}^{n-2} (\sqrt{|\sqrt{|(X_i)^{C1_i} + C2_i|}|} \times e^{\frac{1}{n} \sum_{i=0}^{n-1} (-\frac{\sqrt{X_i}}{-(X_i)})})$$

where :

$$C1 = [-3, -2, -2, 3, -2, 2, 2, -3, 2]$$

$$C2 = [1., -1., -10., -40., -0.6, 2., 27.18281828, -3., -0.5]$$

$$f_{112}(X) = \sqrt{\sum_{i=0}^{n-1} (\sin(|X_i| + X_i \times C1_i \times X_i + C2_i))} + (\sum_{i=0}^{n-2} (\frac{-(\sqrt{X_i})}{\log |\frac{X_i}{X_{i+1}}|} + X_{i+1}))^{-2}$$

where :

$$C1 = [-0.9, -4., 2.71828183, -8., -7., 0.6, 0.5, 5., -3.14159265, 9.]$$

$$C2 = [0.3, 0.2, -0.8, -5., -0.7, 0.31415927, 0.7, -0.4, -0.27182818, 0.4]$$

$$f_{113}(X) = \frac{\frac{1}{n} \sum_{i=0}^{n-1} (X_i - C1_i - \frac{X_i + X_i}{2})}{\sum_{i=0}^{n-1} ((X_i)^{C2_i})} - \sum_{i=0}^{n-1} (X_i + C3_i) - \sum_{i=0}^{n-2} (\frac{X_i + X_{i+1}}{2})$$

where :

$$C1 = [-2., -0.9, -0.4, -0.3, -0.27182818]$$

$$C2 = [3, 3, -3, -3, -3]$$

$$C3 = [0.5, -0.1, -0.5, 3., -0.5]$$

$$f_{114}(X) = \sin(\sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (\frac{\frac{X_i}{C1_i}}{-(X_i)})}) \times \cos(\sqrt{\sum_{i=0}^{n-2} (-(\sqrt{e^{\frac{|X_{i+1}| + X_{i+1}}{2}}}))})$$

where :

$$C1 = [-40., -6., -0.8, -10., 0.6, 3., -31.41592654, 27.18281828, 2., 0.6]$$

$$f_{115}(X) = \log \frac{1}{n} \sum_{i=0}^{n-1} (\frac{X_i - C1_i - \sqrt{X_i}}{(X_i - C2_i)^{C3_i}}) - \frac{1}{n-1} \sum_{i=0}^{n-2} (\cos((\frac{\sqrt{-(X_i)} + \frac{\frac{X_i}{X_{i+1}}}{-(X_i)} + X_{i+1} + X_i \times X_i + X_i}{3})^{C4_i}))$$

where :

$$C1 = [-2., -2.]$$

$$C2 = [-0.3, -5.]$$

$$C3 = [3, -3]$$

$$C4 = [3]$$

$$f_{116}(X) = |(\frac{1}{n} \sum_{i=0}^{n-1} (\frac{e^{\sqrt{X_i}}}{|C1_i + X_i|}))^{-3}| - \frac{1}{n} \sum_{i=0}^{n-1} (-(\tanh(\sqrt{X_i}))) - (\frac{1}{n} \sum_{i=0}^{n-1} (e^{X_i} + \log X_i - \cos(X_i) + X_i - C2_i))$$

where :

$$C1 = [2., 2., 2.71828183, 0.31415927, 4., -4., 1., -4., 0.4, 3.14159265]$$

$$C3 = [0.5, 3.14159265, -0.6, 2., -0.9, -3.14159265, 2., -0.31415927, -0.3, -0.8]$$

$$f_{117}(X) = \sin(\sum_{i=0}^{n-2} (|\frac{|X_i|}{\sqrt{X_i}} \times X_i \times C1_i \times X_i + X_i|)) + |\sum_{i=0}^{n-2} (\log \sqrt{e^{-(X_{i+1})}} - \log \frac{C3_i + X_{i+1} + X_i \times X_i + X_{i+1} - X_i + \frac{C4_i}{X_{i+1}}}{4} + \sqrt{X_{i+1}} + \sqrt{X_i} - \frac{|X_{i+1}|}{X_{i+1} + X_{i+1}})|$$

where :

$$C1 = [40., -1., -0.7, 10.]$$

$$C2 = [-2, 3, -3, 3]$$

$$C3 = [-0.6, -0.8, 0.31415927, 1.]$$

$$C4 = [0.8, 7., 1., 2.]$$

$$f_{118}(X) = |\frac{1}{n} \sum_{i=0}^{n-1} (\log \frac{\frac{\sqrt{X_i}}{\frac{X_i}{C1_i}}}{\frac{X_i - C2_i}{\frac{X_i}{C3_i}}} + (\sqrt{X_i})^{C4_i} \times -(X_i + C5_i) + (-(X_i - C6_i))^{C7_i} + -(\sqrt{|X_i|}) + \frac{\sqrt{X_i} \times X_i \times X_i}{\frac{X_i \times X_i}{\sqrt{X_i}}})|$$

where :

$$C1 = [50., 2., -1., -30., -6., 0.9, 30., 3.14159265, 0.8, -1.]$$

$$C2 = [0.6, -3., -4., 0.27182818, -2., 2., -0.31415927, -0.4, 2., 0.4]$$

$$C3 = [-0.6, 1., 31.41592654, -20., 31.41592654, 6., 0.7, 7., 0.6, 0.5]$$

$$C4 = [3, -2, 2, -2, 3, 2, -2, -2, 2, -3]$$

$$C5 = [0.27182818, -4., -0.3, 0.3, -1., -0.2, -0.1, -0.27182818, -0.8, 4.]$$

$$C6 = [-2.71828183, 0.3, 1., 0.6, -2.71828183, -3., -0.27182818, 5., 2., -0.4]$$

$$C7 = [-3, 2, 2, 3, 2, 2, 2, 2, 3, 3]$$

$$f_{119}(X) = \log \frac{1}{n-1} \sum_{i=0}^{n-2} (|\frac{-(X_{i+1}) + |X_{i+1}| + \sqrt{X_{i+1}} + X_i \times X_{i+1}}{4}|) + e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (-(\cos(X_i \times X_i)))}$$

$$f_{120}(X) = \sum_{i=0}^{n-1} (\cos(\frac{X_i + X_i + X_i + X_i}{4}) - \tanh(\frac{X_i}{C1_i})) + \frac{1}{n} \sum_{i=0}^{n-1} (\frac{X_i + X_i - \frac{X_i}{C2_i}}{\sqrt{\sin(X_i)}}) - \sum_{i=0}^{n-1} (\log X_i + C3_i + \sin(X_i) + X_i \times X_i + \cos(X_i)) + \sum_{i=0}^{n-2} (-(\cos(X_{i+1})) - \tanh(X_{i+1}) \times \sqrt{X_i})$$

where :

$$\begin{aligned} C1 &= [30., -0.9, 50., -8., -40., -0.6, 0.5, -6., -27.18281828, 9.] \\ C2 &= [-0.5, 5., 31.41592654, -2.71828183, 30., 8., 40., 0.8, 9., 3.] \\ C3 &= [0.6, 0.5, 0.2, 4., -0.4, -1., -2.71828183, -0.4, 0.4, 4.] \end{aligned}$$

$$f_{121}(X) = \sum_{i=0}^{n-1} (-(\tanh(|\frac{X_i - C1_i + e^{X_i}}{2}|))) + \frac{1}{n-1} \sum_{i=0}^{n-2} (|\log |X_i| + e^{X_i} - (X_i) - (X_i)^{C2_i}|) - \frac{\sum_{i=0}^{n-1} (-(\cos(|X_i + C3_i|)) + \tanh(\sqrt{|X_i| \times |X_i|}))}{\sum_{i=0}^{n-2} (\tanh((-e^{X_{i+1}}) + |X_{i+1} - X_i|)^{C4_i}))}$$

where :

$$\begin{aligned} C1 &= [3., -0.6] \\ C2 &= [3] \\ C3 &= [-0.5, -0.6] \\ C4 &= [-3] \end{aligned}$$

$$f_{122}(X) = \frac{|\frac{1}{n} \sum_{i=0}^{n-1} (|\tanh(e^{\frac{X_i + X_i - C2_i + \sqrt{X_i} - (X_i)}{C1_i + X_i - C2_i + \sqrt{X_i} - (X_i)}})|)|}{\tanh(\sum_{i=0}^{n-2} (-(\frac{-(X_{i+1} + X_{i+1})}{|\sqrt{X_{i+1}}|} + (\frac{-(X_{i+1})}{\sqrt{X_{i+1}}})^{C3_i} + e^{\sqrt{X_i + C4_i}} + (-X_{i+1})^{C5_i} - X_{i+1} \times X_{i+1} \times e^{X_i})))}$$

where :

$$\begin{aligned} C1 &= [6., 27.18281828] \\ C2 &= [1., 0.4] \\ C3 &= [-3] \\ C4 &= [-3.14159265] \\ C5 &= [3] \end{aligned}$$

$$f_{123}(X) = \sum_{i=0}^{n-2} (\frac{\tanh(X_i + X_i - X_{i+1} + X_{i+1})}{(-X_i)^{C1_i} - \tanh(e^{X_i})}) \times \frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\sqrt{\frac{\sqrt{C2_i} - X_i + |X_i \times X_i| + \frac{X_i}{C3_i} - X_i - C4_i}{3}})) - \cos(\sum_{i=0}^{n-2} (e^{\sqrt{-(\sqrt{X_i}) \times |\sqrt{X_{i+1}}|})))$$

where :

$$\begin{aligned}
C1 &= [-3, 2, 2, -2] \\
C2 &= [4., -0.4, -0.9, 0.9, -0.6] \\
C3 &= [2., -20., 31.41592654, 10., -4.] \\
C4 &= [-0.7, -1., 0.27182818, -2., -0.2]
\end{aligned}$$

$$f_{124}(X) = \frac{\frac{1}{n} \sum_{i=0}^{n-1} ((|\sin(X_i)| - (\frac{X_i}{C1_i}))^{C2_i})}{\sum_{i=0}^{n-2} (\log \frac{\sqrt{X_{i+1} \times X_i} + X_i + X_{i+1} - X_i \times X_i + (X_i - X_{i+1})^{C3_i} + \sqrt{X_{i+1} \times - (X_i)}}{4})} - \cos(\frac{1}{n} \sum_{i=0}^{n-1} (|(X_i - C4_i)^{C5_i}| \times \frac{C6_i \times X_i}{\frac{X_i}{C7_i}} + -(X_i \times X_i)))$$

where :

$$\begin{aligned}
C1 &= [1., -7., 50., 9., -5., 4., -7., 7., 3.14159265, -7.] \\
C2 &= [2, -2, 3, 3, -3, -2, 2, -2, 3, -2] \\
C3 &= [2, -3, -2, 3, 2, -2, -2, 2, 3] \\
C4 &= [-1., 3.14159265, -5., -0.31415927, 2.71828183, -0.31415927, -0.6, 0.31415927, -2., 0.27182818] \\
C5 &= [2, 2, -2, 3, -2, -3, -3, -3, -3, -3] \\
C6 &= [-0.9, -10., -6., 0.8, 1., -0.9, -7., 0.7, 27.18281828, 3.] \\
C7 &= [-20., -30., -2., 2.71828183, 0.6, -6., -4., 4., 8., -0.6]
\end{aligned}$$

$$f_{125}(X) = \frac{\sqrt{\sum_{i=0}^{n-1} (\tanh(e^{|X_i|}))}}{\sin(\frac{1}{n} \sum_{i=0}^{n-1} ((-(X_i) + \sqrt{X_i})^{C1_i}))}$$

where :

$$C1 = [2, -3, -2, -2, 2, 2, -3, -2, -2, -3]$$

$$f_{126}(X) = (\sum_{i=0}^{n-1} (\frac{|-(\sin(X_i)) - \sqrt{X_i} - e^{X_i}| + -(\tanh(e^{\sqrt{X_i}}))}{2}))^{-2} - \frac{1}{n} \sum_{i=0}^{n-1} (\sin(-(\sqrt{-(X_i)} + -(\frac{X_i}{C1_i})))) \times \frac{1}{n-1} \sum_{i=0}^{n-2} (\sin(\sqrt{-(X_{i+1}) - |X_i| + \frac{-(X_{i+1})}{|X_i|}}))$$

where :

$$C2 = [-8., 7., 2.71828183, 8., -8., 7., -0.5, -50., -2., 50.]$$

$$f_{127}(X) = \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} (\cos(\frac{\sqrt{\sqrt{X_{i+1}} \times e^{X_i}}}{e^{-(X_i)} + \frac{|X_{i+1}| + X_i}{2}}))}{\sum_{i=0}^{n-1} (- (\sqrt{\frac{\log X_i}{-(X_i)}} - \sqrt{|X_i| + -(X_i)}))} - \sqrt{\frac{1}{n-1} \sum_{i=0}^{n-2} (|e^{\log C1_i + X_i + |\tanh(X_i)|}|)}$$

where :

$$C1 = [3.14159265, -1., 0.4, 0.31415927, -0.5, -0.27182818, -5., 3.14159265, 2.71828183]$$

$$f_{128}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{e^{X_i - C1_i} \times X_i} - \frac{X_i + X_i}{2} - \sqrt{X_i} + -(X_i \times X_i) - |X_i \times -(X_i \times X_i)|) + (\frac{1}{n-1} \sum_{i=0}^{n-2} (- (\tanh(-(|X_{i+1}|) - \sqrt{X_{i+1}} + X_i - X_{i+1}))))^{-2}$$

where :

$$C1 = [-0.9, -0.31415927, -0.27182818, 0.7, 0.4, -0.1, 0.5, -0.2, -1., 2.]$$

$$f_{129}(X) = \tanh(\sum_{i=0}^{n-1} (\frac{X_i \times X_i \times X_i - C1_i + C2_i - -(X_i) + \frac{X_i - C3_i}{e^{-(\sqrt{X_i})}} + X_i + C4_i}{4})) - \tanh(\sum_{i=0}^{n-1} (e^{\sqrt{-(X_i)}}))$$

where :

$$C1 = [-0.27182818, -5.]$$

$$C2 = [-0.5, -0.8]$$

$$C3 = [-0.3, 0.3]$$

$$C4 = [0.31415927, -0.2]$$

$$f_{130}(X) = \log \sqrt{\sum_{i=0}^{n-1} (\sqrt{|e^{X_i}| + e^{X_i}})}$$

$$f_{131}(X) = |\sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (- (\sqrt{|e^{X_i}| - \frac{X_i + C1_i + \sqrt{X_i} + \sqrt{e^{X_i} + C2_i}}}{3}}))|}$$

where :

$$C1 = [-0.1, -3.14159265, 2.71828183, 0.4, -2., 0.27182818, 3.14159265, 1., -0.3, 0.1]$$

$$C2 = [-0.2, 4., 0.8, 0.1, 0.9, -0.27182818, -3.14159265, -0.27182818, -2.71828183, -0.6]$$

$$f_{132}(X) = \sqrt{\log \sum_{i=0}^{n-1} (\sqrt{e^{X_i}} - \frac{\sqrt{X_i}}{\frac{C1_i}{X_i}})}$$

where :

$$C1 = [2., -2.71828183]$$

$$f_{133}(X) = \log \sum_{i=0}^{n-2} (\frac{(e^{X_i} - X_i + C1_i)^{C2_i}}{|X_i| + (X_i)^{C3_i} - \sqrt{X_i + X_i}}) - |\frac{1}{n} \sum_{i=0}^{n-1} (e^{-(|X_i + C4_i|)})|$$

where :

$$C1 = [0.27182818, -1., -2., 0.2, 0.8, 2.71828183, 0.2, -1., -0.27182818]$$

$$C2 = [-2, -3, 3, 3, -2, -3, 3, -3, -3]$$

$$C3 = [3, 2, 3, -3, -3, 2, -3, -2, -2]$$

$$C4 = [-0.1, -0.6, -0.3, -4., -0.31415927, 1., -0.7, 0.7, -0.9, -0.9]$$

$$f_{134}(X) = e^{\frac{1}{n} \sum_{i=0}^{n-1} (-(\sqrt{-(X_i)} - \frac{X_i}{C1_i} - \sqrt{X_i}) + \frac{\sqrt{\sin((X_i)^{C2_i}) + \frac{|X_i| \times \tanh(X_i)}{|-(X_i)|}} + -(|X_i - C3_i|) + \log(X_i + C4_i)^{C5_i}}{4}}) - \frac{1}{n-1} \sum_{i=0}^{n-2} (\sin(\sqrt{X_i - X_{i+1}}))}$$

where :

$$C1 = [2.71828183, -40., 8., 8., -3.14159265, 50., -0.9, -10., 8., -30.]$$

$$C2 = [-2, -3, 3, 2, 2, -2, -2, -2, 2, 2]$$

$$C3 = [-0.2, 0.7, -2.71828183, 0.27182818, 0.27182818, 0.31415927, 2., -0.9, 0.31415927, 3.]$$

$$C4 = [2.71828183, -1., 1., 2., 5., 0.3, 0.8, -2., -0.4, 0.7]$$

$$C5 = [3, -3, 3, 3, 2, 3, 3, 3, 2, 2]$$

$$f_{135}(X) = \sqrt{\left| \sum_{i=0}^{n-1} \left(\frac{X_i + X_i + X_i}{3} - X_i - C1_i - e^{X_i} + -(X_i) + |X_i| \right) \right| \cos\left(\frac{X_i + C2_i}{\frac{X_i + X_i + X_i}{3}}\right)}$$

where :

$$\begin{aligned} C1 &= [0.5, 0.31415927, 1., 0.9, 0.9] \\ C2 &= [0.27182818, -0.1, -3., 0.7, 0.1] \end{aligned}$$

$$f_{136}(X) = \frac{1}{n} \sum_{i=0}^{n-1} \left(\sqrt{\frac{(e^{\log X_i - C1_i - X_i - C2_i + |X_i| + \sin(\sqrt{X_i} - (X_i)))^{C3_i} + \left| \frac{(X_i)^{C4_i}}{X_i + C5_i} \right| + -(\cos(|X_i|)) \times \sqrt{(X_i + C6_i)^{C7_i}} \times |\tanh(X_i)| - \sqrt{X_i - C8_i} + \sqrt{\frac{|X_i|}{C9_i}}}{\frac{X_i}{C10_i} - X_i + C11_i}} \right)}$$

where :

$$\begin{aligned} C1 &= [1., 0.4, 0.1, -5., 1.] \\ C2 &= [-0.3, 5., 0.2, -5., -5.] \\ C3 &= [3, -3, 2, 2, 2] \\ C4 &= [2, -2, 3, 3, 3] \\ C5 &= [0.1, 0.5, 2., 0.8, -0.9] \\ C6 &= [0.31415927, -2., -4., -3., 2.] \\ C7 &= [2, 3, 2, 2, 3] \\ C8 &= [2.71828183, 1., -0.9, 0.2, 3.14159265] \\ C9 &= [8., 0.9, 27.18281828, 6., -31.41592654] \\ C10 &= [-3.14159265, -20., -0.5, -9., -0.6] \\ C11 &= [0.31415927, 0.3, 0.5, -3., 3.] \end{aligned}$$

$$f_{137}(X) = \left| \sum_{i=0}^{n-2} (e^{\sqrt{\sin(X_{i+1}) - -(X_{i+1})}} + \sin\left(\frac{|X_i + X_i|}{(X_{i+1})^{C1_i} \times |X_{i+1}|}\right)) \right| \times \left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{-(\sqrt{\sin(X_i \times X_i)})}{-(|\tanh(X_i) \times -(X_i)|)} \right) \right)^{-3}$$

where :

$$C1 = [-2, 2, 3, 2, -3, -2, 3, 2, 2]$$

$$f_{138}(X) = \left| \frac{\sum_{i=0}^{n-1} \left(\frac{e^{X_i \times X_i + \frac{X_i}{C1_i} + \log X_i + e^{X_i}}}{e^{\cos(X_i) + |X_i|}} - \cos(|X_i - C2_i| \times \sqrt{X_i} + X_i - C3_i) \right)}{\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\left| \frac{\sqrt{X_{i+1} \times X_{i+1} \times e^{X_i} + C4_i \times X_{i+1} + (X_{i+1})^{C5_i} \times -(X_{i+1} - X_i) + \sqrt{(\sqrt{X_i})^{C6_i}}}}{3} \right| \right)} \right|$$

where :

$$\begin{aligned} C1 &= [20., -10., -0.7, 40., -5., -2.71828183, -5., 1., 1., 0.6] \\ C2 &= [0.9, 2.71828183, 3., -2.71828183, -2.71828183, -1., -3.14159265, -5., -1., 0.3] \\ C3 &= [-0.2, -2., 3., -3.14159265, 0.9, -5., 1., -3.14159265, -0.1, -0.7] \\ C4 &= [0.6, -30., -6., 27.18281828, -2., 0.9, -1., -40., 3.14159265] \\ C5 &= [3, 2, 3, -2, -3, -3, -2, 3, 2] \\ C6 &= [-2, -3, 2, 3, 2, 2, 2, -3] \end{aligned}$$

$$f_{139}(X) = \sum_{i=0}^{n-1} \left(\frac{\cos(e^{-(|X_i|)})}{e^{\tanh(X_i + C1_i) + (|X_i|)^{C2_i} + \sqrt{X_i} \times (X_i)^{C3_i} + \frac{\sqrt{X_i}}{X_i + C4_i}}} \right) \times \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{\log \frac{\frac{X_{i+1}}{X_i} + X_i \times X_{i+1}}{\frac{X_i}{C5_i} - \frac{X_i + C6_i}{2}}}{\frac{\sin(\sqrt{(X_i)^{C7_i}} + e^{\sqrt{\sin(X_i)}} + |\sqrt{\sin(X_{i+1})}| + (-\sqrt{X_{i+1}}))^{C8_i}}{4}} \right) \times \log \frac{1}{n-1} \sum_{i=0}^{n-2} (-(|X_{i+1} + X_i| \times e^{X_i} \times e^{X_i}))$$

where :

$$\begin{aligned} C1 &= [-3.14159265, -0.7] \\ C2 &= [2, -3] \\ C3 &= [-2, 2] \\ C4 &= [0.7, -3.] \\ C5 &= [1.] \\ C6 &= [-3.] \\ C7 &= [3] \\ C8 &= [-3] \end{aligned}$$

$$f_{140}(X) = \sqrt{-\left(\frac{1}{n} \sum_{i=0}^{n-1} ((\log C1_i \times X_i + X_i \times X_i)^{C2_i})\right)}$$

where :

$$\begin{aligned} C1 &= [-8., -10., 7., 8., 3.] \\ C2 &= [3, -2, -2, 2, -2] \end{aligned}$$

$$f_{141}(X) = \frac{\frac{1}{n} \sum_{i=0}^{n-1} (|\log |X_i||)}{\frac{1}{n-1} \sum_{i=0}^{n-2} (-\log X_{i+1} - X_i)} \times \sqrt{\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\frac{X_i + X_{i+1} + X_i}{X_i + X_i}})}$$

$$f_{142}(X) = \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} ((-\log X_{i+1}) + e^{-(X_i)})^{C1_i}}{\tanh(\frac{1}{n-1} \sum_{i=0}^{n-2} ((X_{i+1} - X_i)^{C2_i} + |\sqrt{X_i}| - \sqrt{e^{(\frac{X_i}{X_{i+1}} + \sqrt{X_i})^{C3_i}}}))}$$

where :

$$\begin{aligned} C1 &= [-2, 3, 2, 3, 3, 3, -3, 2, 2] \\ C2 &= [-3, -3, -2, -3, 2, -2, -2, -2, 2] \\ C3 &= [-3, 2, -2, 3, 2, -2, 3, 2, -3] \end{aligned}$$

$$f_{143}(X) = \frac{\sum_{i=0}^{n-1} (\sqrt{-(\sin(e^{X_i}) + \sqrt{X_i} - \log X_i + X_i + C1_i + e^{\frac{X_i}{C2_i}}))} - \sum_{i=0}^{n-1} (\log \frac{-(\frac{X_i}{C3_i}) + -(|X_i|) + e^{X_i + C4_i} + \frac{X_i \times C5_i}{\sqrt{X_i}}}}{4})}{\tanh(\sum_{i=0}^{n-2} (e^{|X_{i+1} - X_i| \times -(|X_{i+1}|) + (X_{i+1})^{C6_i}}))}$$

where :

$$\begin{aligned} C1 &= [-0.6, 0.4, -1., 0.31415927, 1., 0.7, -5., -0.8, 1., -0.27182818] \\ C2 &= [50., 2., 0.7, 27.18281828, -3., 2., 3.14159265, -20., 0.6, 50.] \\ C3 &= [-8., -6., 6., 0.6, 0.6, -4., -5., 4., -0.8, 0.6] \\ C4 &= [-0.6, 0.4, -1., 0.31415927, 1., 0.7, -5., -0.8, 1., -0.27182818] \\ C5 &= [8., 30., 8., 0.7, 40., -0.9, 9., 27.18281828, -4., -9.] \\ C6 &= [2, -2, -2, 3, -3, -3, 3, -3, -3] \end{aligned}$$

$$f_{144}(X) = (\tanh(\sum_{i=0}^{n-2} (X_{i+1} \times X_i \times \sqrt{X_{i+1}} - X_{i+1} \times X_{i+1} + X_{i+1} + X_{i+1} \times -(X_{i+1}) + X_i)))^{-3}$$

$$f_{145}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (\log \sqrt{(e^{X_i})^{C1_i}}) + \tanh(\sum_{i=0}^{n-1} (|-(X_i + C2_i \times |-(X_i + C3_i)|)|))$$

where :

$$\begin{aligned} C1 &= [-2, -2, 3, 2] \\ C2 &= [5., 3., -0.6, -0.5, 0.31415927] \\ C3 &= [-4., 0.27182818, 2., 0.1, 2.] \end{aligned}$$

$$f_{146}(X) = e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{|X_{i+1}|})} + \sin\left(\sum_{i=0}^{n-2} \left(-\left(\frac{-(X_{i+1})}{X_{i+1} \times X_{i+1}}\right)\right)\right) - \sum_{i=0}^{n-2} \left(X_{i+1} + X_{i+1} - \frac{X_i + X_i}{2}\right)$$

$$f_{147}(X) = \sum_{i=0}^{n-2} \left(\log \sqrt{e^{-\left(\frac{X_{i+1} - X_i + X_{i+1} + X_i}{2}\right)}}\right) - \sum_{i=0}^{n-2} \left(\sin\left(\sqrt{\frac{\frac{(X_i)^{C1_i + e^{X_{i+1}} + e^{X_{i+1} + X_i + X_i}}}{4}}{\sqrt{\frac{X_i + X_i}{2}}}}\right)\right) + \log \frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{(-(\sqrt{X_i} \times X_i - e^{C3_i \times X_i}))^{C4_i}}{-(\frac{X_i}{C5_i} + |X_i|)}\right)$$

where :

$$\begin{aligned} C1 &= [-2, -3, -2, -3, 3, 2, -2, -2, -2] \\ C2 &= [-3, 3, 2, -3, -3, 3, -3, 2, 2] \\ C3 &= [-1., -5., 50., 7., -30., 0.8, -3.14159265, -7., -7., 8.] \\ C4 &= [-2, 3, -3, -3, -2, -2, 2, -2, 3, -3] \\ C5 &= [27.18281828, 9., 4., 6., 0.6, -6., -20., -30., 4., -50.] \end{aligned}$$

$$\begin{aligned} f_{148}(X) &= \sum_{i=0}^{n-1} \left(\log (\sqrt{e^{X_i}} + X_i + C1_i \times \sqrt{X_i})^{C2_i} - \sqrt{\sqrt{|X_i|} \times (|X_i|)^{C3_i}} + \right. \\ &\quad \left. - (\sqrt{\sin(|(X_i)^{C4_i} - |X_i||)}) \times \log |(e^{-(X_i) + -(X_i) + -(X_i) + X_i + C5_i}) \times |e^{X_i} - |X_i|| - (\frac{\sqrt{X_i} + |X_i| + X_i \times X_i + \sqrt{X_i}}{4})^{C6_i}| \right) \end{aligned}$$

where :

$$\begin{aligned} C1 &= [0.4, 4., 0.1, 0.9, 0.9, -0.6, -0.3, 0.8, -0.3, -3.14159265] \\ C2 &= [2, -2, -2, 2, -3, 2, 2, 2, 3] \\ C3 &= [3, 2, 3, -2, -2, 2, -2, 2, 3, 2] \\ C4 &= [-2, -2, -2, -3, 2, 3, -3, -3, 3, -3] \\ C5 &= [0.8, -0.9, 4., 0.2, -4., -0.3, 2., 0.27182818, 2.71828183, -0.5] \\ C6 &= [-2, 2, 2, 2, -3, -3, 2, -3, -2, 3] \end{aligned}$$

$$f_{149}(X) = \log \sum_{i=0}^{n-1} \left(\sqrt{\frac{e^{X_i+C1_i-C2_i}}{-(\frac{X_i}{C3_i})}} \right) - \frac{1}{n} \sum_{i=0}^{n-1} \left(\sqrt{\frac{C4_i - X_i}{|X_i|}} + \sqrt{(X_i)^{C5_i} + (X_i)^{C6_i} + C7_i \times X_i} \right)$$

where :

$$C1 = [2.71828183, -4., 0.8, 0.8, -0.5, -3., -2.71828183, -1., 2.71828183, -3.14159265]$$

$$C2 = [0.3, 0.5, -0.8, 0.9, -5., 0.3, -0.3, -0.31415927, 0.6, 0.9]$$

$$C3 = [-6., -31.41592654, -5., -0.8, -40., -31.41592654, 6., 4., 0.5, -40.]$$

$$C4 = [-0.2, -0.27182818, 0.5, -2., 0.1, 2.71828183, 5., 0.1, 0.31415927, -5.]$$

$$C5 = [-2, -3, -3, 3, 2, -2, -2, -3, -3, 3]$$

$$C6 = [-2, -2, 3, -3, -2, 3, -2, -3, -2, 3]$$

$$C7 = [-2.71828183, -50., -7., -30., 40., 7., 3.14159265, -1., 0.5, -8.]$$

$$f_{150}(X) = e^{-\left(\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(-(X_i+X_{i+1})))\right)}$$

$$f_{151}(X) = \cos\left(\sum_{i=0}^{n-1} (e^{-(X_i)})\right) - \left(\frac{1}{n-1} \sum_{i=0}^{n-2} (\log |e^{X_i}| + |\sqrt{X_{i+1}}|)\right)^3$$

$$f_{152}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{\sin((X_i)^{C1_i})}{\sin((|e^{X_{i+1}+X_i}|)^{C2_i}) \times \sin((- (X_{i+1} + X_i) + e^{X_{i+1} \times X_{i+1}} + e^{X_i} + \sqrt{X_{i+1}} + e^{X_i - X_{i+1}})^{C3_i})} \right)$$

where :

$$C1 = [-3]$$

$$C2 = [-2]$$

$$C3 = [-3]$$

$$f_{153}(X) = \sin\left(\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{-\left(e^{X_i+X_i+C1_i \times X_i+X_i}\right)}{-\left(\frac{e^{X_i+X_i+C2_i}}{2} + |\sqrt{X_i}|\right)} \times e^{\frac{\frac{C3_i+X_i+X_i+X_i \times -(X_i)}{X_i \times X_i - |X_i|}}{|\frac{\sqrt{X_i}}{|X_i|}|}} \right)\right)^{-2}\right)$$

where :

$$\begin{aligned}
C1 &= [0.6, -0.4, 4., -3.14159265, -0.1] \\
C2 &= [-3., 0.3, 0.1, 3., -4.] \\
C3 &= [-0.5, 0.31415927, -2.71828183, -0.2, -0.6]
\end{aligned}$$

$$f_{154}(X) = \frac{(\sum_{i=0}^{n-2} (\frac{\sin(X_i) + X_i + X_{i+1}}{2}))^2}{e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (|\frac{X_i}{X_{i+1}}|)}}$$

$$f_{155}(X) = \sum_{i=0}^{n-2} (\frac{\sqrt{\frac{|X_{i+1}|}{X_{i+1} - X_i}} + \cos(X_i) \times -(X_i) + (X_i \times X_i)^{C1_i} + -(\tanh(|X_{i+1}|))}{3}) + (\sum_{i=0}^{n-1} (\frac{\cos(X_i) + C2_i \times X_i + e^{X_i \times X_i}}{2}))^2$$

where :

$$\begin{aligned}
C1 &= [-3, 3, -3, -2] \\
C2 &= [0.8, 30., 0.6, -10., -30.]
\end{aligned}$$

$$f_{156}(X) = (- (\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(|e^{X_i}|))))^{-2}$$

$$f_{157}(X) = |\frac{1}{n-1} \sum_{i=0}^{n-2} (-((X_i)^{C1_i} + \frac{X_{i+1} + X_i + C2_i}{3})) \times \sum_{i=0}^{n-1} (\tanh(X_i) + X_i \times C3_i + (X_i)^{C4_i} + \tanh(X_i) - (- (\frac{X_i}{C5_i})^{C6_i}))|$$

where :

$$\begin{aligned}
C1 &= [3, 2, 3, -2, -3, -2, -2, 3, 3] \\
C2 &= [1., -0.5, -0.4, -2., 0.1, -0.27182818, -0.27182818, 0.7, -4.] \\
C3 &= [2., 50., -7., 0.8, 50., 3., -3.14159265, 30., -30., 6.] \\
C4 &= [3, 3, 3, 3, -2, -3, 3, -2, -3, 2] \\
C5 &= [40., 2.71828183, 0.7, -31.41592654, 2.71828183, -31.41592654, 50., -2., -3.14159265, -3.14159265] \\
C6 &= [3, -2, 3, -3, -2, 2, -3, 2, -2, 2]
\end{aligned}$$

$$f_{158}(X) = (\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(\sqrt{-(|\frac{X_{i+1} + X_{i+1} + X_i + X_{i+1}}{\sqrt{X_i}}|)}) - \tanh(e^{\frac{\sqrt{X_{i+1} \times X_{i+1} + |X_{i+1}|} + \sqrt{X_{i+1}} - (X_i) - X_i \times C1_i + |X_i| + \frac{\sqrt{X_{i+1} - X_i}}{-(X_i + X_{i+1})} + |X_i| + |X_i| \times X_i - X_{i+1} + X_{i+1} + X_{i+1}}}{4}))^{-2}$$

where :

$$C1 = [30., -0.6, -0.8, 0.9, 2., -50., 6., 2., 8.]$$

$$f_{159}(X) = (\tanh(\sum_{i=0}^{n-1} (\frac{|e^{X_i}| \times C1_i + X_i - X_i + X_i - C2_i + \frac{X_i}{C3_i} \times |e^{X_i}|}{2})))^{-3}$$

where :

$$\begin{aligned} C1 &= [-0.27182818, 0.5, 0.9, -5., 4., -3.14159265, -0.3, 1., 0.4, 3.14159265] \\ C2 &= [0.4, 0.7, -0.6, -2.71828183, 3.14159265, -0.1, 0.31415927, 2.71828183, -0.6, -2.] \\ C3 &= [-3., -0.5, 8., -4., 0.9, 10., 27.18281828, 7., -7., 7.] \end{aligned}$$

44

$$f_{160}(X) = (\sum_{i=0}^{n-2} (\frac{\sqrt{X_{i+1}} \times -(C1_i \times X_{i+1})}{\frac{X_i \times X_{i+1} \times e^{X_i + X_i + X_{i+1}}}{2} \times X_i \times X_{i+1} \times e^{X_i}}))^{-2} + -(\sum_{i=0}^{n-1} (X_i))$$

where :

$$C1 = [31.41592654, -3., 0.8, 2., 50., 3.14159265, 40., -9., -2.]$$

$$f_{161}(X) = \sum_{i=0}^{n-2} (- (e^{\sqrt{X_{i+1} + C1_i}} - \sqrt{|\sqrt{e^{X_{i+1} + C2_i}}|})) + |\frac{1}{n} \sum_{i=0}^{n-1} (|\cos(|X_i + \frac{X_i}{C3_i} + X_i \times X_i \times X_i|)|)$$

where :

$$\begin{aligned} C1 &= [-5.] \\ C2 &= [-5.] \\ C3 &= [-50., 10.] \end{aligned}$$

$$f_{162}(X) = \tanh(-(\sum_{i=0}^{n-2} (\frac{-(-(X_{i+1}) + -(X_i) + \sqrt{X_i - X_{i+1}})}{|\sqrt{X_{i+1} + X_{i+1}}| + \sqrt{\sqrt{X_{i+1} + (X_i)^{C1_i}}}} \times (X_{i+1})^{C2_i} + -(\sqrt{X_{i+1}}))))))$$

where :

$$\begin{aligned} C1 &= [-3] \\ C2 &= [2] \end{aligned}$$

$$f_{163}(X) = \sum_{i=0}^{n-1} (\log e^{\frac{\frac{X_i + X_i}{|X_i|}}{-\frac{(X_i) + X_i - C1_i}{2}}} + e^{|\sqrt{X_i - C2_i}|})$$

where :

$$\begin{aligned} C1 &= [-2.71828183, 0.7, 2.71828183, -0.2, -3.] \\ C2 &= [5., 0.7, 0.6, 1., 0.3] \end{aligned}$$

45

$$f_{164}(X) = -(\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(X_{i+1} \times X_{i+1} + -(X_{i+1}) + -(X_{i+1})) \times \log \frac{X_{i+1} + X_i + C1_i}{3} \times e^{X_{i+1}})) + \sqrt{\frac{1}{n-1} \sum_{i=0}^{n-2} (\frac{\sqrt{\cos(X_i + X_{i+1})}}{|\frac{X_i - X_{i+1} + e^{X_{i+1}} + \log X_i + (X_{i+1})^{C2_i}}{4}|})}$$

where :

$$\begin{aligned} C1 &= [0.27182818] \\ C2 &= [-3] \end{aligned}$$

$$f_{165}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{|\tanh(X_{i+1})| - \frac{-(X_i)}{X_{i+1}}} + -(\sin(\sqrt{-(X_i)})) + \sqrt{\frac{|X_{i+1}|}{\log X_{i+1}}} \times \sin(|X_{i+1}|) + -(X_{i+1}) - e^{X_{i+1}} + (\cos(|\sqrt{X_i}|))^{C1_i})$$

where :

$$C1 = [3]$$

$$f_{166}(X) = \log \sum_{i=0}^{n-1} \left(\frac{-(X_i - C1_i)}{e^{X_i + C2_i}} \right) \times \sum_{i=0}^{n-1} (|\sqrt{e^{\frac{X_i}{C3_i}}}|)$$

where :

$$C1 = [-0.27182818, 3., 0.3, 0.8, 0.8]$$

$$C2 = [-0.3, -3.14159265, 0.2, -0.1, 0.27182818]$$

$$C3 = [-1., 30., -30., -0.5, 0.6]$$

$$f_{167}(X) = e^{\frac{1}{n-1} \sum_{i=0}^{n-2} (\frac{X_{i+1} + X_i}{2} + \cos(X_{i+1}) - \sqrt{X_i + X_i})} - \tanh(\sum_{i=0}^{n-2} (-(|\sqrt{X_{i+1}}|)))$$

$$f_{168}(X) = \tanh(|\sum_{i=0}^{n-1} (\sqrt{\frac{|X_i| + e^{X_i - C1_i} + \frac{X_i}{C2_i}}{|X_i|}})|)$$

where :

$$C1 = [-4., -0.2]$$

$$C2 = [0.8, -0.5]$$

$$f_{169}(X) = \sum_{i=0}^{n-1} (e^{\cos((X_i)^{C1_i})}) \times (\sum_{i=0}^{n-1} (\sin(X_i) - X_i + X_i))^2$$

where :

$$C1 = [2, 3, 2, -3, 2]$$

$$f_{170}(X) = \log \sum_{i=0}^{n-2} (|X_i| - (X_{i+1}) + \sqrt{X_i - X_{i+1}}) + \sum_{i=0}^{n-2} (\sqrt{(\sqrt{X_i})^{C1_i}}) \times \sum_{i=0}^{n-1} (-(\tanh(X_i)) \times (e^{X_i})^{C2_i})$$

where :

$$C1 = [-2]$$

$$C2 = [2, -2]$$

$$f_{171}(X) = |\frac{1}{n} \sum_{i=0}^{n-1} (\frac{X_i - C1_i - |X_i| + (e^{X_i})^{C2_i} + \frac{\log X_i + -(X_i)}{\tanh(X_i + X_i)}}{\log \frac{(\frac{X_i}{C3_i})^{C4_i} + e^{X_i - C5_i}}{2}})|$$

where :

$$C1 = [3., -4., -0.31415927, 0.6, -0.8]$$

$$C2 = [3, 2, 2, -3, 2]$$

$$C3 = [40., 27.18281828, 0.5, 0.8, -0.9]$$

$$C4 = [2, -2, 2, 2, 2]$$

$$C5 = [-2., -0.31415927, -0.7, 4., -1.]$$

47

$$f_{172}(X) = \sqrt{\sum_{i=0}^{n-2} (\frac{\log \frac{\sqrt{e^{X_{i+1}}}}{\frac{X_{i+1} + X_i}{2}}}{(|\frac{|X_{i+1}| + X_{i+1} + C1_i}{2}|)^{C2_i}})} - (\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\frac{\cos(-(X_i) + X_i \times X_{i+1}) + \sin(-(X_{i+1})) - \tanh(|X_{i+1}|) + \cos(\sqrt{X_{i+1}}) \times \cos((X_{i+1})^{C3_i}) - X_{i+1} - X_i \times X_{i+1} \times X_i)}{3}}))$$

where :

$$C1 = [5., 0.3, -2.71828183, -2., -2., -0.2, -3., -3.14159265, -0.5]$$

$$C2 = [-3, -3, -3, -2, 3, -2, 3, 3, 3]$$

$$C3 = [3, -2, -3, -2, -3, 3, 2, -3, 3]$$

$$f_{173}(X) = |\sum_{i=0}^{n-2} (\frac{(\frac{X_i}{X_{i+1}})^{C1_i}}{X_{i+1} - X_i})| \times \sum_{i=0}^{n-1} (\tanh(X_i) \times (X_i)^{C2_i} + \sin(X_i + C3_i)) \times \frac{1}{n} \sum_{i=0}^{n-1} (\frac{\log \sqrt{X_i}}{\frac{X_i}{C4_i}} + \log \sqrt{X_i})$$

where :

$$C1 = [-2, -2, -2, -2, 3, -3, -3, -3, -3]$$

$$C2 = [3, -2, -2, -2, 3, -3, -2, -2, -3, 2]$$

$$C3 = [-3., 0.8, -0.4, 0.6, -0.1, 0.8, 0.5, -0.2, -5., 0.2]$$

$$C4 = [31.41592654, 30., 0.9, -50., -0.7, -27.18281828, -6., 40., -9., 9.]$$

$$f_{174}(X) = e^{\sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (- (\sqrt{-(C1_i - X_i)} + |X_i \times X_i| \times \sqrt{|X_i + C2_i|} \times \sqrt{X_i} \times \sqrt{-(C3_i - X_i)} + |X_i \times X_i| \times \sqrt{X_i - C4_i}))}}$$

where :

$$\begin{aligned} C1 &= [0.5, 5., 5., -0.8, -5., -0.4, -0.9, -0.9, 0.2, -0.6] \\ C2 &= [-0.7, -4., -4., -0.5, 0.3, -3.14159265, -1., 0.4, 0.8, 0.27182818] \\ C3 &= [0.5, 5., 5., -0.8, -5., -0.4, -0.9, -0.9, 0.2, -0.6] \\ C4 &= [-0.4, 2., 1., -0.8, 0.8, -0.9, -0.4, -1., 0.3, -0.4] \end{aligned}$$

$$f_{175}(X) = \left(\sum_{i=0}^{n-1} (\tanh(e^{|X_i - C1_i|} + e^{|X_i - C2_i|} + |\frac{X_i}{C3_i}|)) + \frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{X_i + C4_i \times X_i + C5_i + -(X_i) \times X_i + C6_i + \tanh(-(|X_i + C7_i|) - -(X_i))}{2} \right) \right)^{-2}$$

where :

$$\begin{aligned} C1 &= [-0.9, 0.31415927, 2., -5., -4., 0.2, -3., -3., 1., 0.5] \\ C2 &= [-0.9, 0.31415927, 2., -5., -4., 0.2, -3., -3., 1., 0.5] \\ C3 &= [-30., -9., 20., -0.7, 2., -0.6, 7., -0.8, 40., -27.18281828] \\ C4 &= [-0.31415927, -3.14159265, -0.31415927, 0.9, -1., -3.14159265, 3.14159265, -0.1, -0.31415927, -3.14159265] \\ C5 &= [-2.71828183, 1., -5., 0.6, 5., 0.1, 0.27182818, 2., 0.31415927, 3.14159265] \\ C6 &= [0.7, -2.71828183, 3.14159265, -0.7, -3.14159265, 3., -0.9, -0.5, -4., -0.5] \\ C7 &= [0.6, -0.5, 3.14159265, -0.31415927, 0.6, 1., 4., 2.71828183, 0.7, -0.31415927] \\ C8 &= [-0.9, 0.31415927, 2., -5., -4., 0.2, -3., -3., 1., 0.5] \end{aligned}$$

$$f_{176}(X) = \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\log \frac{|(X_i)^{C1_i}|}{\frac{X_{i+1} + X_i + X_i}{3} - \sqrt{X_{i+1} \times \frac{e^{X_{i+1}}}{X_i - X_{i+1}}}} \right)}{\frac{\sum_{i=0}^{n-1} (- (\tanh(\frac{e^{-(X_i)}}{X_i + C2_i})))}{\frac{1}{n-1} \sum_{i=0}^{n-2} ((-(X_{i+1}))^{C3_i} \times -(|X_{i+1}|) \times X_i)}}$$

where :

$$\begin{aligned} C1 &= [-3, -2, -2, 2, -3, -3, -2, 2, 3] \\ C2 &= [-0.6, -0.5, 0.1, 0.31415927, 0.6, -1., 0.3, -0.27182818, 2., 5.] \\ C3 &= [-2, 3, 2, -2, -2, -3, -2, -3, -3] \end{aligned}$$

$$f_{177}(X) = \sum_{i=0}^{n-2} (C1_i \times X_i) + \frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\frac{X_i + C2_i + |e^{X_i}| + \sqrt{\sqrt{-(X_i)} - C3_i}}{3}))$$

where :

$$\begin{aligned} C1 &= [9.] \\ C2 &= [0.3, -0.9] \\ C3 &= [-20., -50.] \end{aligned}$$

$$f_{178}(X) = -(\log \frac{1}{n-1} \sum_{i=0}^{n-2} ((\sqrt{e^{X_i}})^{C1_i} + \frac{\sqrt{X_i + X_{i+1}}}{C2_i \times X_{i+1} \times |X_i|}))$$

where :

$$\begin{aligned} C1 &= [3] \\ C2 &= [-8.] \end{aligned}$$

$$f_{179}(X) = \log \sum_{i=0}^{n-2} (|(X_{i+1} \times X_{i+1} + e^{X_i})^{C1_i}|) + \sum_{i=0}^{n-1} (|(X_i \times e^{X_i} \times X_i + C2_i)^{C3_i}|)$$

where :

$$\begin{aligned} C1 &= [3] \\ C2 &= [4., -2.] \\ C3 &= [3, -2] \end{aligned}$$

$$f_{180}(X) = \log \frac{1}{n-1} \sum_{i=0}^{n-2} ((e^{X_i})^{C1_i} + \frac{C2_i + X_{i+1} + X_i}{3} - e^{X_{i+1}}) - \sqrt{\sum_{i=0}^{n-2} (-(e^{\cos(X_{i+1})}))}$$

where :

$$\begin{aligned} C1 &= [3] \\ C2 &= [0.3] \end{aligned}$$

$$f_{181}(X) = |(\frac{1}{n} \sum_{i=0}^{n-1} (|-(\log X_i + \frac{X_i}{C1_i} + X_i + C2_i + X_i + C3_i)|))^2|$$

where :

$$\begin{aligned} C1 &= [-1., -2.71828183] \\ C2 &= [5., 0.9] \\ C3 &= [-3., -2.] \end{aligned}$$

$$f_{182}(X) = \sum_{i=0}^{n-1} (\cos(-(\frac{X_i + X_i}{2} - \frac{X_i}{C1_i}))) + \frac{1}{n-1} \sum_{i=0}^{n-2} (\log \frac{|X_i + X_i + X_{i+1}|}{e^{X_{i+1} \times X_i}}) - (\sum_{i=0}^{n-1} (|\frac{\tanh(\sqrt{X_i}) + e^{X_i - C2_i} + \log \frac{X_i}{C3_i} + \tanh(\sqrt{X_i})}{4}|))$$

where :

$$\begin{aligned} C1 &= [-0.5, -8.] \\ C2 &= [0.8, -2.71828183] \\ C3 &= [-2., -27.18281828] \end{aligned}$$

$$f_{183}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (\log(\sqrt{X_i - C1_i}^{C2_i}) - \frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{\sin(e^{X_{i+1} \times X_{i+1}})}) + \sum_{i=0}^{n-2} (\sqrt{-(X_i + X_i) \times \frac{\tanh(X_i)}{-(X_i)} + (-(X_{i+1}))^{C3_i} + \frac{|X_i|}{e^{X_i}}}))$$

where :

$$\begin{aligned} C1 &= [-0.27182818, 2.] \\ C2 &= [-3, -3] \\ C3 &= [3] \end{aligned}$$

$$f_{184}(X) = -(\sum_{i=0}^{n-1} (e^{X_i} + \log \sqrt{X_i} \times |X_i|)) \times e^{\frac{1}{n} \sum_{i=0}^{n-1} (\tanh(X_i + C1_i))}$$

where :

$$C1 = [0.8, -0.9]$$

$$f_{185}(X) = (\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{X_{i+1} - X_i} + \sqrt{X_i} \times \tanh(X_{i+1})) + \sum_{i=0}^{n-2} (\frac{-(X_{i+1}) + X_i \times X_{i+1}}{2}))^2$$

$$f_{186}(X) = (\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{e^{X_i} - \frac{X_i}{C1_i}}))^2 + -(\frac{1}{n} \sum_{i=0}^{n-1} (-e^{\frac{X_i}{C2_i}}))$$

where :

$$\begin{aligned} C1 &= [-30., 20.] \\ C3 &= [27.18281828, 2.] \end{aligned}$$

$$f_{187}(X) = e^{\tanh(\frac{1}{n-1} \sum_{i=0}^{n-2} (\frac{X_{i+1} + X_{i+1}}{2} - X_i \times X_i))}$$

$$f_{188}(X) = \sqrt{\frac{\frac{1}{n} \sum_{i=0}^{n-1} (|e^{X_i} - C1_i + X_i|)}{\sum_{i=0}^{n-1} (|e^{(\frac{\sqrt{X_i \times X_i + X_i - C2_i}}{2})^{C3_i}}|)}}$$

where :

$$\begin{aligned} C1 &= [-3.14159265, 0.27182818, 2.71828183, 1., -0.6, -3.14159265, 5., -0.2, 3., -0.1] \\ C2 &= [3., -5., -0.1, 1., 2.71828183, 0.6, -0.4, -0.9, -2., 1.] \\ C3 &= [-2, 3, -3, -2, 3, -3, -2, -2, 2, -3] \end{aligned}$$

$$f_{189}(X) = -(\frac{1}{n} \sum_{i=0}^{n-1} ((\sin(-(X_i)))^{C1_i})) \times \frac{1}{n} \sum_{i=0}^{n-1} (|e^{X_i} + X_i - C2_i|) - \frac{1}{n} \sum_{i=0}^{n-1} (\tanh(X_i - C3_i) + \cos(X_i - C4_i) + X_i - C5_i + e^{X_i} + (|X_i|)^{C6_i})$$

where :

$$\begin{aligned}
C1 &= [2, 3, 2, -3, 3, 2, -2, 2, 3, 2] \\
C2 &= [-0.6, 0.4, -0.9, -0.9, 0.6, 2., -0.1, 5., -4., 2.71828183] \\
C3 &= [0.2, -3.14159265, 2.71828183, -2.71828183, 0.27182818, -2.71828183, 0.2, 0.31415927, -0.7, -0.3] \\
C4 &= [-0.6, 3.14159265, 0.31415927, 3.14159265, 0.31415927, -4., -0.31415927, 0.27182818, 2.71828183, -0.5] \\
C5 &= [-5., -5., 1., 0.8, -0.27182818, 0.9, -4., -0.2, -3., 0.8] \\
C6 &= [3, -3, -2, 2, 3, 2, -3, 3, 3, -2]
\end{aligned}$$

$$\begin{aligned}
f_{190}(X) &= \frac{1}{n-1} \sum_{i=0}^{n-2} ((\cos(X_i))^{C1_i} - \tanh(e^{X_{i+1}}) + \sqrt{-(X_{i+1})^{C2_i}}) \times \sum_{i=0}^{n-2} (\sqrt{\cos(-(e^{X_{i+1}})))}) \\
&\times \frac{1}{n} \sum_{i=0}^{n-1} (\cos(\frac{|X_i|}{C3_i + X_i + X_i + X_i} \times \frac{e^{X_i} + \sqrt{X_i}}{2})) \times \frac{1}{n-1} \sum_{i=0}^{n-2} ((\cos(|X_{i+1}|))^{C4_i} - \sqrt{-(|X_i|)})
\end{aligned}$$

where :

$$\begin{aligned}
C1 &= [2, -3, -2, 3, -3, -3, -3, 3, -2] \\
C2 &= [-3, -3, -2, -3, 3, 2, 2, -2, 2] \\
C3 &= [-0.1, 0.27182818, 0.2, -0.3, 0.5, 0.8, -1., -3.14159265, -0.5, -0.8] \\
C4 &= [-3, 2, 2, 2, -2, -3, -2, 3, -3]
\end{aligned}$$

52

$$f_{191}(X) = (\tanh(\frac{1}{n-1} \sum_{i=0}^{n-2} (\sqrt{\frac{\sqrt{X_i}}{e^{-(X_i)}}} + \frac{C1_i}{X_i})))^{-3}$$

where :

$$C1 = [5.e + 01, 5.e + 00, -9.e + 03, 6.e + 00, -7.e + 03, -7.e + 00, -8.e + 03, -4.e + 01, 6.e - 01]$$

$$f_{192}(X) = \frac{\frac{1}{n} \sum_{i=0}^{n-1} (X_i \times C1_i)}{\tanh(\sum_{i=0}^{n-2} (e^{\frac{\frac{X_{i+1}}{X_i} + -(X_{i+1}) \times (|X_{i+1}|)^{C2_i} + X_{i+1} + X_i - (X_i)^{C3_i} \times \sqrt{X_i}}}{2} - |(X_{i+1})^{C4_i} \times \sqrt{X_i}| \times \sqrt{X_i - X_{i+1} + \sqrt{X_{i+1}}}}))}$$

where :

$$\begin{aligned}
C1 &= [-20., 0.6, -5., 3.14159265, 8., -8., 9., -9., 0.9, 0.5] \\
C2 &= [-2, 3, -3, 2, 2, 3, -3, 2, -2] \\
C3 &= [-2, -2, 3, 3, -2, -3, 2, -2, -2] \\
C4 &= [-2, -2, 3, 3, -2, -3, 2, -2, -2]
\end{aligned}$$

$$f_{193}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (X_i \times C1_i) - \sum_{i=0}^{n-1} (X_i + C2_i) - \tanh\left(\sum_{i=0}^{n-2} (\sqrt{|-(||X_i| + X_{i+1} + X_{i+1})|})\right)$$

where :

$$\begin{aligned}
C1 &= [10., 30., 4., -0.5] \\
C2 &= [3., -0.3, -2., 0.6, 0.6]
\end{aligned}$$

$$f_{194}(X) = \sum_{i=0}^{n-2} (\log(\sqrt{e^{X_i + C1_i}})^{C2_i}) + \left| \frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\tanh(X_i - X_{i+1})} \times \cos(X_i + C3_i)) \right|$$

where :

$$\begin{aligned}
C1 &= [0.4] \\
C2 &= [2] \\
C3 &= [0.4]
\end{aligned}$$

$$f_{195}(X) = -\left(\tanh\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sqrt{e^{\frac{-(X_{i+1}) + \frac{X_i + 1}{C1_i}}}{2}}\right)\right)\right)$$

where :

$$C1 = [-30.]$$

$$f_{196}(X) = -\left(\sum_{i=0}^{n-2} (|-(X_{i+1}) + |X_{i+1}||)\right) - \left(\frac{1}{n} \sum_{i=0}^{n-1} \left(e^{\frac{\tanh(X_i) - |X_i| + \sin(|X_i|) + \sqrt{X_i \times X_i} + X_i}{4}}\right)\right)$$

$$f_{197}(X) = (\frac{1}{n-1} \sum_{i=0}^{n-2} (\log \sqrt{X_{i+1} + X_i} + e^{-(X_i)}))^2 - |\frac{1}{n} \sum_{i=0}^{n-1} (\log \sqrt{X_i} + e^{X_i})| + \sum_{i=0}^{n-2} (\tanh(X_{i+1}))$$

$$f_{198}(X) = \sqrt{\sum_{i=0}^{n-1} (|X_i|)} \times (\frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\frac{-(X_i - C1_i) + \sqrt{\frac{X_i}{C2_i}}}{2})))^2$$

where :

$$\begin{aligned} C1 &= [-0.8, 3.14159265] \\ C2 &= [6., -4.] \end{aligned}$$

$$f_{199}(X) = |\frac{\sum_{i=0}^{n-1} (e^{X_i})}{\sum_{i=0}^{n-1} (e^{|\tanh(X_i)| + |\tanh(X_i)|})}|$$

$$f_{200}(X) = \log (\frac{1}{n} \sum_{i=0}^{n-1} (e^{X_i + C1_i} + X_i + C2_i - \sqrt{X_i} + e^{\sqrt{X_i}} + -(X_i) \times |X_i| + \frac{\sqrt{X_i \times X_i} + \sqrt{e^{|X_i|}} + -(X_i) + -(X_i)}{3} - e^{X_i} \times X_i \times X_i + |-(X_i)| + -(\frac{X_i}{C3_i}) \times -(X_i \times X_i)))^2$$

where :

$$\begin{aligned} C1 &= [0.8, 0.7] \\ C2 &= [-0.31415927, 0.7] \\ C3 &= [5., -50.] \end{aligned}$$

$$f_{201}(X) = \log \frac{1}{n} \sum_{i=0}^{n-1} (e^{X_i - C1_i + X_i \times X_i})$$

where :

$$C1 = [0.5, -0.2]$$

$$f_{202}(X) = \cos\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\left(\frac{X_i + X_i}{2} + -(X_i)\right)^{C1_i}\right)\right) - \sum_{i=0}^{n-2} (|X_{i+1} + X_{i+1} - X_i|)$$

where :

$$C1 = [3, -3]$$

$$f_{203}(X) = \frac{\left(\frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(X_{i+1} + X_i) + e^{X_{i+1}} \times X_{i+1} \times X_{i+1})\right)^3}{\tanh\left(\sum_{i=0}^{n-1} \left(\frac{|e^{\left(\frac{X_i}{C1_i}\right)^{C2_i}}|}{||X_i| + (X_i)^{C3_i} - |X_i| \times \sqrt{X_i}}\right)\right)}$$

where :

$$C2 = [-0.8, -31.41592654, 0.6, 10., 20., -4., -8., -30., 5., 3.14159265]$$

$$C3 = [2, 2, 2, -3, -3, 3, 2, 2, 2, -3]$$

$$C4 = [3, 2, -2, -3, 2, -3, -2, -3, 2, -3]$$

$$f_{204}(X) = \cos\left(\sum_{i=0}^{n-1} (|-(e^{X_i - C1_i}) \times -(e^{X_i}) + C2_i - X_i + \sqrt{X_i}|)\right) + \frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{e^{\frac{-(\sin(X_i)) + \frac{X_i}{C3_i} - X_i - C4_i}{2}}}{\sqrt{|\cos(X_i)|} - \sin\left(\frac{X_i}{C5_i}\right) - |\log X_i|}\right) \times \frac{1}{n-1} \sum_{i=0}^{n-2} \left((\cos(X_{i+1} + X_i) + \sin(|X_i|) \times \frac{\sin(X_{i+1} - X_i) + \frac{\frac{C6_i}{X_{i+1}}}{\tanh(X_{i+1})}}{2})^{C7_i}\right)$$

where :

$$C1 = [-0.5, 0.3, 3., 2.71828183, 0.7, -0.2, -0.4, 3.14159265, -3., 0.6]$$

$$C2 = [-0.4, 0.31415927, 1., 0.1, 3.14159265, -3.14159265, -0.6, 0.27182818, -3., -0.1]$$

$$C3 = [9., 3.14159265, -0.9, -27.18281828, -5., 1., -0.9, -9., 7., -31.41592654]$$

$$C4 = [5., -3., -4., 30., 20., 0.6, 7., 1., -40., 2.]$$

$$C5 = [5., 40., -30., -2.71828183, -31.41592654, 3.14159265, -40., 6., -6., 6.]$$

$$C6 = [-50., 1., -40., 20., 0.7, -7., 2.71828183, 27.18281828, -4.]$$

$$C7 = [-3, 2, 2, -3, 3, -2, 3, 3, 2]$$

$$f_{205}(X) = \frac{-(\sum_{i=0}^{n-2}((e^{X_i})^{C1_i}))}{\tanh(\sum_{i=0}^{n-2}(-(e^{X_i})^{C2_i} \times -(X_i - X_{i+1}))))}$$

where :

$$\begin{aligned} C1 &= [3, 3, -3, -2, 2, 2, -2, -2, 3] \\ C2 &= [3, 3, -3, -2, 2, 2, -2, -2, 3] \end{aligned}$$

$$f_{206}(X) = \frac{\sum_{i=0}^{n-1} \left(\frac{\frac{(X_i + X_i)^{C1_i}}{X_i^{C2_i}}}{|X_i \times C3_i + -(X_i)|} \times \frac{\log e^{X_i - (X_i)^{C4_i}}}{\sqrt{-(X_i \times X_i)}} + \frac{\sqrt{X_i \times X_i} + -(\log X_i)}{\tanh((X_i + X_i)^{C5_i})} - \sqrt{e^{\sqrt{X_i}}} + -(|X_i \times e^{X_i}|) \right)}{e^{\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\frac{(\cos(-(\sqrt{X_i})))^{C6_i}}{\log(\sqrt{X_{i+1}} - X_{i+1})^{C7_i}} \right)}}$$

where :

$$\begin{aligned} C1 &= [-2, 3, -3, 2, 3, -3, 3, 2, -2] \\ C2 &= [3.14159265, 6., 8., -31.41592654, 3., 5., -10., 40., -30., 30.] \\ C3 &= [9., -0.8, 31.41592654, -7., -40., -0.7, -6., 10., 50., 27.18281828] \\ C4 &= [-2, 3, 3, 3, 2, -2, -3, -3, -2, 3] \\ C5 &= [-3, 3, -3, 3, -2, 3, 3, 2, 3, 3] \\ C6 &= [-3, -2, 3, -3, 3, -2, 2, -2, -2] \\ C7 &= [-3, -2, 3, -3, 3, -2, -3, 2, -2] \end{aligned}$$

$$f_{207}(X) = \frac{\sqrt{-\left(\frac{1}{n-1} \sum_{i=0}^{n-2} \left(\left(\frac{X_i}{\frac{X_{i+1}}{X_i}} \right)^{C1_i} \right) \right)}}{\tanh\left(\sum_{i=0}^{n-2} \left(e^{\frac{X_i}{X_{i+1}}} \times \frac{X_i}{X_{i+1}} \right) \right)}$$

where :

$$C1 = [-3, 2, -3, 2, -2, 3, 2, -3, -3]$$

$$f_{208}(X) = \left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\tanh \left(\frac{e^{\frac{-(X_i - C1_i)}{|X_i + C2_i|}}}{|\sqrt{|\sqrt{X_i} + X_i \times X_i} + e^{C3_i + X_i}| + X_i \times X_i|} \right) \times - \left(\frac{\sqrt{X_i} + e^{X_i} + -(X_i) - -(X_i \times X_i) + \frac{X_i}{C4_i} - e^{X_i} + |X_i \times X_i|}{4 - (e^{C5_i + X_i})} \right) \right) \right)^{-2}$$

where :

$$\begin{aligned} C1 &= [-3., -0.2, 0.27182818, -0.8, -0.27182818, -5., -1., 0.31415927, -2., -2.] \\ C2 &= [4., -0.2, 0.5, 0.9, -0.27182818, 0.2, -5., 0.1, 0.6, -4.] \\ C3 &= [0.8, -5., 0.3, 0.9, 2.71828183, -0.1, -5., -4., -3., -0.9] \\ C4 &= [2., -50., -9., -40., -50., 8., -1., -0.9, -8., -0.8] \\ C5 &= [0.8, -5., 0.3, 0.9, 2.71828183, -0.1, -5., -4., -3., -0.9] \end{aligned}$$

$$f_{209}(X) = -(\tanh(\sum_{i=0}^{n-1} (\frac{\sqrt{X_i \times C1_i} + \frac{-(X_i)}{\sqrt{X_i + -(|\sqrt{X_i}|)}} + -(\sqrt{X_i})}{3} - \frac{X_i + X_i + X_i + X_i}{4} - -(X_i))))$$

where :

$$C1 = [1., 0.3]$$

$$f_{210}(X) = \sum_{i=0}^{n-2} (C1_i \times X_i) \times \frac{1}{n} \sum_{i=0}^{n-1} (e^{X_i + -(X_i)}) + -(\frac{1}{n} \sum_{i=0}^{n-1} (-(X_i) + -(X_i) + \log X_i - -(X_i)))$$

where :

$$C1 = [-8.]$$

$$f_{211}(X) = \tanh(\frac{1}{n} \sum_{i=0}^{n-1} (|\sqrt{\frac{\frac{X_i}{C1_i} + \sqrt{X_i} + |X_i| + \frac{\frac{X_i}{C2_i}}{-(X_i)}}}{3}|)) + \log \sum_{i=0}^{n-1} (e^{X_i + C3_i})$$

where :

$$\begin{aligned} C1 &= [1., -0.5] \\ C2 &= [-0.6, -6.] \\ C3 &= [0.5, -3.14159265] \end{aligned}$$

$$f_{212}(X) = \tanh\left(\frac{1}{n-1} \sum_{i=0}^{n-2} (|\sqrt{|\sqrt{X_i}|}|)\right) \times \sum_{i=0}^{n-1} \left(\log \frac{e^{X_i}}{C1_i}\right)$$

where :

$$C1 = [-9., -40., -0.9, -2.71828183, 1.]$$

$$f_{213}(X) = \frac{1}{n} \sum_{i=0}^{n-1} \left(\log \frac{\sqrt{X_i} + e^{X_i} + |\sqrt{X_i}| + |\sqrt{X_i}|}{3}\right) - \sum_{i=0}^{n-2} \left(\tanh(-(X_{i+1} + X_i + X_i + X_i - (X_{i+1})))\right) \times \left|\sum_{i=0}^{n-2} \left(\tanh(-(\sqrt{\frac{X_i}{X_{i+1}}} + \sqrt{X_i}))\right)\right|$$

$$f_{214}(X) = \log \sum_{i=0}^{n-2} \left(\frac{\frac{X_i \times X_{i+1} + e^{X_{i+1}} + |X_i| + -(X_{i+1})}{4} \times -(X_i) + e^{X_{i+1}}}{\frac{e^{\sqrt{X_i}} \times |X_i - C1_i|}{-(\frac{X_{i+1}}{X_i}) + \sqrt{\frac{X_{i+1} - X_i}{C2_i - X_i}}}} \right)$$

where :

$$C1 = [-3.14159265]$$

$$C2 = [4.]$$

$$f_{215}(X) = \log \frac{1}{n-1} \sum_{i=0}^{n-2} \left(-\left(\frac{\sqrt{e^{-(\frac{X_i + X_{i+1}}{2})}}}{(X_i)^{C1_i}}\right)\right) - \frac{1}{n} \sum_{i=0}^{n-1} \left(\frac{\log \frac{X_i}{C2_i}}{\tanh(e^{X_i})}\right) + \frac{1}{n-1} \sum_{i=0}^{n-2} \left(\sqrt{\cos(e^{(X_i)^{C3_i}} + |X_i|)}\right)$$

where :

$$C1 = [-2]$$

$$C2 = [6., 10.]$$

$$C3 = [2]$$

$$f_{216}(X)$$

$$= \sqrt{\sum_{i=0}^{n-1} \left(\sqrt{(-(X_i) + |X_i| \times X_i + C1_i \times |X_i| + \sqrt{|X_i|} - e^{X_i + C2_i} + X_i \times X_i \times X_i - C3_i + X_i - C4_i + C5_i - (X_i) - X_i + C6_i \times |X_i| + |X_i + C7_i| - (X_i) - X_i + C8_i \times |X_i|)^{C9_i}}\right)}$$

where :

$$\begin{aligned}
C1 &= [-0.7, -0.4] \\
C2 &= [-3.14159265, 0.2] \\
C3 &= [-27.18281828, 4.] \\
C4 &= [2.71828183, -0.27182818] \\
C5 &= [0.27182818, -0.5] \\
C6 &= [-0.7, -0.4] \\
C7 &= [0.27182818, -0.5] \\
C8 &= [-0.7, -0.4] \\
C9 &= [2, 2]
\end{aligned}$$

$$f_{217}(X) = \left(\sum_{i=0}^{n-1} (\cos(e^{X_i}) + \cos(X_i) - X_i + C1_i) \right)^{-2} \times \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} ((\sin(X_{i+1}))^{C2_i})}{\frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\frac{(X_i)^{C3_i} + \sqrt{e^{X_i}}}{2}))}$$

where :

$$\begin{aligned}
C1 &= [-0.8, 2., 0.4, 2., 1., 0.5, 0.3, -0.6, 0.7, 5.] \\
C3 &= [3, 3, 3, -3, -3, 3, -2, -2, 3] \\
C4 &= [-3, 3, -2, 2, -2, 2, -3, 2, 3, -3]
\end{aligned}$$

$f_{218}(X)$

$$= \cos\left(\left(\frac{1}{n} \sum_{i=0}^{n-1} \left(- (X_i + C1_i) + e^{X_i} \times C2_i + X_i + X_i \times X_i - \frac{X_i}{C3_i} + -(e^{X_i}) + X_i \times X_i \times \sqrt{X_i} + -(C4_i + X_i) \times \frac{X_i + X_i + X_i}{\frac{X_i}{C5_i}} - X_i \times C6_i + X_i + C7_i + X_i + C8_i - C9_i + X_i\right)\right)^{-3}\right)$$

where :

$$\begin{aligned}
C1 &= [-0.2, 2., -5., 5., -0.5, 0.5, -0.5, -0.6, -5., -4.] \\
C2 &= [-1., 0.27182818, 0.31415927, -0.6, -1., 4., 0.31415927, 0.1, 0.31415927, -0.3] \\
C3 &= [9., -0.7, -2., -31.41592654, 8., -2.71828183, 20., -50., 9., -2.71828183] \\
C4 &= [-0.31415927, -2., 0.6, 0.6, 0.3, -4., -5., -3.14159265, -0.3, -0.31415927] \\
C5 &= [-0.8, -2., 27.18281828, 30., -50., -2., -10., -40., 20., 1.] \\
C6 &= [-20., -2., -2., -6., -30., -30., 2.71828183, -31.41592654, 8., 7.] \\
C7 &= [-0.9, -0.3, 0.2, 1., -4., -0.3, -0.4, 0.2, 0.2, -1.] \\
C8 &= [-0.6, -0.4, -3., -0.2, -0.7, 2., -0.3, -0.7, -2.71828183, -1.] \\
C9 &= [-0.31415927, -2., 0.6, 0.6, 0.3, -4., -5., -3.14159265, -0.3, -0.31415927]
\end{aligned}$$

$$f_{219}(X) = \sin\left(\frac{\sum_{i=0}^{n-2} \left(\frac{\sqrt{X_{i+1}} + \frac{(\sqrt{e^{X_{i+1}}})^{C1_i}}{-(\sqrt{X_{i+1}})}}{2}\right)}{\sum_{i=0}^{n-1} \left(e^{\frac{X_i}{C2_i} - \frac{X_i}{C3_i} + X_i \times (\frac{X_i}{C4_i})^{C5_i} + \sqrt{-(C6_i \times X_i)}}\right)}\right)$$

where :

$$\begin{aligned} C1 &= [2, 2, -2, -3, 3, 3, -3, -3, 2] \\ C2 &= [-6., -20., 4., -30., -2.71828183, 8., 40., -50., 10., -4.] \\ C3 &= [-6., -20., 4., -30., -2.71828183, 8., 40., -50., 10., -4.] \\ C4 &= [-40., 27.18281828, -3., 0.8, 0.7, 8., 6., -4., 20., -6.] \\ C5 &= [-2, 2, 2, -2, -2, -3, 2, -3, 3, -3] \\ C6 &= [-9., 10., 3.14159265, -40., -50., 3.14159265, 30., 5., -2.71828183, -0.7] \end{aligned}$$

$$f_{220}(X) = e^{\frac{1}{n} \sum_{i=0}^{n-1} (X_i \times X_i \times \frac{X_i}{C1_i})} \times \sin\left(\sum_{i=0}^{n-1} \left(\sqrt{-(X_i)} \times X_i \times X_i \times \frac{X_i}{C2_i}\right)\right)$$

where :

$$\begin{aligned} C1 &= [1.00000000e + 01, -6.00000000e - 01, -8.00000000e + 03, -6.00000000e + 03, 4.00000000e + 01, 4.00000000e + 03, -3.14159265e - 01, 2.71828183e + 02, 8.00000000e + 03, 6.00000000e - 01] \\ C2 &= [-9., 0.6, -0.9, 0.5, -0.8, -9., 5., 20., -20., 5.] \end{aligned}$$

$$f_{221}(X) = e^{\frac{1}{n} \sum_{i=0}^{n-1} (X_i + C1_i \times \frac{X_i + X_i}{2}) \times \frac{1}{n-1} \sum_{i=0}^{n-2} (\log C2_i + X_{i+1} \times C3_i - X_{i+1})}$$

where :

$$\begin{aligned} C1 &= [-4., -0.4, 0.3, -0.31415927, 3., -2., -0.6, -1., 0.9, 0.3] \\ C2 &= [0.7, 1., -2.71828183, -0.1, 1., 0.31415927, -0.2, -3., -0.4] \\ C3 &= [1., -3.14159265, 0.6, -0.1, -1., -3.14159265, -5., 0.7, -1.] \end{aligned}$$

$$f_{222}(X) = \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} ((X_{i+1} + X_i)^{C1_i}) \times \frac{1}{n-1} \sum_{i=0}^{n-2} (\tanh(e^{|X_{i+1}|} + X_{i+1} \times X_{i+1} \times -(X_{i+1})))}{(\sum_{i=0}^{n-1} (\tanh(e^{\frac{|X_i|}{X_i}}))^2)}$$

where :

$$C1 = [2, 3, -2, -2, -2, -2, 3, -3, -3]$$

$$C2 = [0.8, 0.6, -3.14159265, 2.71828183, -10., -9., -6., -0.9, -20., 5.]$$

$$f_{223}(X) = (\tanh(\sum_{i=0}^{n-2} (e^{\frac{-(X_{i+1})+X_i+X_{i+1}}{2}+X_i \times X_{i+1}+X_{i+1} \times \frac{X_i+X_i}{2}} - \frac{\sqrt{X_i + X_{i+1} \times \sqrt{-(\sqrt{e^{|X_{i+1}|}}) + X_{i+1}}}}{2})))^{-2}$$

$$f_{224}(X) = (\sum_{i=0}^{n-1} (\frac{\frac{\tanh(e^{-(\lfloor \frac{X_i}{C1_i} \rfloor)})}{e^{X_i}} + \log X_i}{\sqrt{\cos(X_i)} + \log X_i} + \tanh(e^{X_i+C2_i \times \sqrt{X_i+C3_i}}) + -(\cos(|e^{X_i} - \sqrt{X_i - C4_i} - C5_i|)) + X_i - C6_i \times \frac{X_i}{C7_i} \times \tanh(e^{X_i})) - \frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{X_i}))^{-2}$$

where :

$$C1 = [0.6, 3.14159265, 0.7, -31.41592654, -50., -1., 30., -50., -27.18281828, -27.18281828]$$

$$C2 = [3.14159265, 0.1, 0.3, -2., 0.31415927, -0.8, 2.71828183, 5., -3., 0.4]$$

$$C3 = [1., -0.4, -0.6, 0.2, 0.6, -0.2, 0.3, 0.9, 0.9, -0.6]$$

$$C4 = [-0.3, -2.71828183, -2., -0.3, -0.9, -3.14159265, 3.14159265, -0.1, -2., 0.5]$$

$$C5 = [-0.3, -2.71828183, -2., -0.3, -0.9, -3.14159265, 3.14159265, -0.1, -2., 0.5]$$

$$C6 = [3., -0.1, -0.2, 0.31415927, -0.5, 0.5, 0.8, -3.14159265, 4., -0.6]$$

$$C7 = [3.14159265, 0.1, 0.3, -2., 0.31415927, -0.8, 2.71828183, 5., -3., 0.4]$$

$$f_{225}(X) = (\frac{1}{n} \sum_{i=0}^{n-1} (-e^{\tanh(\frac{X_i+X_i}{2}-(\lfloor X_i \rfloor)})))^3 + \sin(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{|X_{i+1}|}))$$

$$f_{226}(X) = \sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{\frac{X_i + X_i + X_i}{3} + \frac{X_i}{C1_i}}) + e^{\tanh(\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{X_i} - (X_i) \times \sqrt{X_i - C2_i} - (X_i) \times \sqrt{X_i - C3_i}))}$$

where :

$$\begin{aligned} C1 &= [30., 3.] \\ C2 &= [-0.6, -3.] \\ C3 &= [-0.6, -3.] \end{aligned}$$

$$f_{227}(X) = \sum_{i=0}^{n-1} (\sqrt{-(X_i) - |X_i|}) \times \sum_{i=0}^{n-1} (\sqrt{e^{-(\sqrt{X_i})}}) + \cos(\sum_{i=0}^{n-2} (X_i \times X_{i+1}))$$

$$f_{228}(X) = \log \frac{1}{n} \sum_{i=0}^{n-1} \left(- \left(\left(\frac{X_i - C1_i \times e^{X_i}}{e^{\frac{X_i}{C2_i}}} \right)^{C3_i} \right) - \sum_{i=0}^{n-1} \left(\sqrt{\tanh(e^{\sqrt{X_i} + \frac{X_i}{C4_i}})} \right) + \frac{1}{n} \sum_{i=0}^{n-1} (e^{\sin(|X_i| + X_i \times X_i + \sqrt{X_i} \times |X_i| - X_i \times X_i)}) \right)$$

where :

$$\begin{aligned} C1 &= [-0.31415927, -0.31415927] \\ C2 &= [-30., -8.] \\ C3 &= [2, -3] \\ C4 &= [-20., -2.71828183] \end{aligned}$$

$$f_{229}(X) = \left| \frac{1}{n} \sum_{i=0}^{n-1} \left(\tanh \left(\frac{-\left(\frac{X_i}{C1_i} \right) + X_i \times X_i + e^{X_i}}{2} \right) \right) \right| \times \tanh \left(\frac{1}{n} \sum_{i=0}^{n-1} \left(\left(\frac{-\left(e^{X_i} \right)}{e^{\left| \frac{X_i + X_i}{2} \right|}} \right)^{C2_i} \right) \right)$$

where :

$$\begin{aligned} C1 &= [-30., 20.] \\ C2 &= [3, 2] \end{aligned}$$

$$f_{230}(X) = \left(\sum_{i=0}^{n-1} \left(\frac{\left| \frac{X_i}{C1_i} \right|}{\left| X_i \right| + \frac{X_i}{C2_i}} \right) \right)^{-2} - \sum_{i=0}^{n-1} (|\log |(X_i + C3_i)^{C4_i}| - e^{X_i + C5_i - \frac{X_i}{C6_i}} \times -(e^{|X_i| + X_i - C7_i})|)$$

where :

$$\begin{aligned}
C1 &= [-10., 7.] \\
C2 &= [-27.18281828, -3.14159265] \\
C4 &= [-0.31415927, 0.3] \\
C5 &= [2, 3] \\
C6 &= [0.31415927, 0.8] \\
C7 &= [3., 0.5] \\
C8 &= [0.7, 0.1]
\end{aligned}$$

$$f_{231}(X) = \log \sum_{i=0}^{n-2} (-(e^{X_i + X_{i+1}})) \times \sum_{i=0}^{n-2} (-(|-(e^{C1_i \times X_{i+1}})|))$$

where :

$$C1 = [0.7]$$

$$f_{232}(X) = -(\frac{1}{n} \sum_{i=0}^{n-1} (e^{-(X_i + X_i + X_i)} \times -(X_i))) \times \frac{\frac{1}{n-1} \sum_{i=0}^{n-2} (C1_i - X_{i+1})}{\frac{1}{n} \sum_{i=0}^{n-1} (e^{-(X_i + X_i + X_i)} \times -(X_i))}$$

where :

$$C1 = [2.]$$

$$f_{233}(X) = -(\sum_{i=0}^{n-2} (\frac{X_{i+1}}{C1_i})) + |\frac{1}{n} \sum_{i=0}^{n-1} (\cos(\frac{X_i \times X_i + X_i \times X_i}{|X_i \times X_i|}))|$$

where :

$$C1 = [-10., -8., -31.41592654, -50., 0.9, 31.41592654, -30., 2.71828183, -31.41592654]$$

$$f_{234}(X) = \sum_{i=0}^{n-1} (\log \frac{-(e^{X_i + X_i + C1_i})}{e^{X_i}})$$

where :

$$C1 = [0.1, -0.27182818, 0.9, -5., -5.]$$

$$f_{235}(X)$$

$$= (\tanh(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{\frac{X_i}{X_{i+1}} \times |X_{i+1}|} + X_i - X_{i+1} - \frac{C1_i}{X_i} + |e^{|X_{i+1}|} - (- (X_{i+1}) - e^{X_{i+1}}) + \frac{\sqrt{X_{i+1}}}{\sqrt{X_{i+1}} \times X_i} + \frac{X_i}{|X_i|} \times \sqrt{X_i - X_{i+1}} \times \frac{C3_i}{X_i} + \frac{\sqrt{X_i}}{\sqrt{X_{i+1}}} + e^{\frac{\sqrt{X_{i+1}}}{\frac{X_i \times X_i}{|X_{i+1}|}} + X_i \times X_{i+1} + \sqrt{|X_i|}))^{-3}$$

where :

$$C1 = [2.71828183, 40., -31.41592654, -40., 10., 31.41592654, -30., 8., -2.71828183]$$

$$C2 = [-3., -3.14159265, 3.14159265, 2.71828183, 50., 5., -3.14159265, -8., -3.14159265]$$

$$C3 = [2.71828183, 40., -31.41592654, -40., 10., 31.41592654, -30., 8., -2.71828183]$$

$$f_{236}(X) = |e^{\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{\frac{C1_i}{X_i} \times |X_i|})} \times e^{\frac{1}{n} \sum_{i=0}^{n-1} (\sqrt{\frac{C2_i}{X_i} \times X_i})} - \frac{1}{n-1} \sum_{i=0}^{n-2} (-(X_{i+1} - X_i))|$$

where :

$$C1 = [-7., -31.41592654, -31.41592654, -50., 40., -7., -0.7, 3.14159265, -27.18281828, 0.9]$$

$$C2 = [2.00000000e+00, 3.14159265e-01, 1.00000000e+02, -8.00000000e+00, -4.00000000e+01, -6.00000000e+00, 4.00000000e+00, -2.00000000e+03, 9.00000000e+01, 2.71828183e+00]$$

$$f_{237}(X) = e^{\frac{1}{n} \sum_{i=0}^{n-1} (-(X_i) + X_i \times X_i \times \sin(\frac{C1_i}{X_i - C2_i}) \times \sqrt{(X_i)^{C3_i} - (X_i) - (\frac{C4_i \times X_i + |X_i|}{2})})} - e^{\frac{1}{n} \sum_{i=0}^{n-1} (-(X_i) + X_i \times \frac{C5_i}{X_i} \times \sin(\frac{C6_i}{X_i}) \times \sqrt{X_i - C7_i - C8_i \times X_i + C9_i \times X_i})}$$

where :

$$C1 = [-2., 0.5, 6., -5., -3.14159265, -2., 0.7, 0.5, 20., 0.9]$$

$$C2 = [0.9, 0.27182818, -5., 2., -0.31415927, -4., 0.2, -0.1, -0.4, -5.]$$

$$C3 = [2, -2, 3, 3, -2, -2, 3, 3, -2, 3]$$

$$C4 = [-5., -0.8, -2., -0.7, 0.9, 20., 4., 30., -20., 5.]$$

$$C5 = [-2., 0.5, 6., -5., -3.14159265, -2., 0.7, 0.5, 20., 0.9]$$

$$C6 = [-2., 0.5, 6., -5., -3.14159265, -2., 0.7, 0.5, 20., 0.9]$$

$$C7 = [7.00000000e+00, 2.00000000e+00, 2.71828183e-01, 4.00000000e-01, 8.00000000e+00, 6.00000000e+00, 3.14159265e+01, 1.00000000e+02, 2.00000000e+02, -6.00000000e+03]$$

$$C8 = [-0.6, 4., -31.41592654, 3., 7., -0.6, -3., 7., 27.18281828, 0.9]$$

$$C9 = [-0.6, 4., -31.41592654, 3., 7., -0.6, -3., 7., 27.18281828, 0.9]$$

$$f_{238}(X) = (\tanh(\sum_{i=0}^{n-1} (e^{X_i+X_i})))^{-3}$$

$$f_{239}(X) = -(\frac{\sum_{i=0}^{n-2} (e^{|-(X_{i+1})+-(X_i)|})}{\frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\frac{X_i+X_i+X_i+X_i}{C1_i} + \frac{X_i}{C2_i} \times |X_i| \times X_i \times X_i - |X_i| + (X_i \times X_i)^{C3_i} + |X_i - C4_i| + -(X_i) + -(\sqrt{X_i + C5_i + X_i} \times X_i \times C6_i - \frac{X_i+X_i+X_i+X_i}{4})))})$$

where :

$$\begin{aligned} C1 &= [-3.14159265, 50., 3., -4., 0.6, -20., -6., -1., 7., -0.5] \\ C2 &= [1., -1., -27.18281828, 27.18281828, -30., 0.6, 0.6, 0.5, -40., -8.] \\ C3 &= [-2, -3, -2, -2, -3, -3, -3, -3, -2, -3] \\ C4 &= [2., -0.9, -0.31415927, 0.27182818, -3., 0.2, 0.1, 0.1, 2.71828183, 5.] \\ C5 &= [-1., 4., 2.71828183, 0.27182818, 0.1, -0.2, -1., 0.8, 0.9, 2.] \\ C6 &= [-3.14159265, 2., 0.6, 5., 20., -0.6, -1., -0.8, 8., -0.8] \end{aligned}$$

65

$$f_{240}(X) = (\tanh(\sum_{i=0}^{n-1} (|X_i| \times \sqrt{X_i} + -(X_i) + \frac{X_i}{C1_i} + |\sqrt{X_i}| + \frac{-(X_i)}{C2_i})))^{-3}$$

where :

$$\begin{aligned} C1 &= [1.00000000e-01, 5.00000000e+03, 4.00000000e+03, -5.00000000e+03, -6.00000000e+00, 5.00000000e+01, 8.00000000e+01, -1.00000000e+02, 2.71828183e+00, 7.00000000e+02] \\ C2 &= [0.9, 50., -30., 0.6, 4., -30., -10., 5., 0.7, -20.] \end{aligned}$$

$$f_{241}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (e^{\sqrt{|\cos(X_i+C1_i+X_i-C2_i+X_i \times C3_i)|}}) \times -(\tanh(\sum_{i=0}^{n-1} (X_i - C4_i + -(\sqrt{X_i}) + \sqrt{X_i - C5_i})))$$

where :

$$\begin{aligned} C1 &= [0.3, -2.] \\ C2 &= [2.71828183, -2.] \\ C3 &= [-5., -2.] \\ C4 &= [2.71828183, -2.] \\ C5 &= [-0.2, -0.5] \end{aligned}$$

$$f_{242}(X) = \sqrt{\frac{1}{n} \sum_{i=0}^{n-1} (\sin(\sqrt{e^{X_i+X_i+X_i+X_i}}))} + \sum_{i=0}^{n-2} (-(\tanh(-(X_i + X_{i+1} + X_i + X_{i+1} + C1_i))))$$

where :

$$C1 = [1.]$$

$$f_{243}(X) = |\sum_{i=0}^{n-1} (e^{\tanh(-(X_i) + \frac{X_i}{C1_i})})| + |\sum_{i=0}^{n-2} (\sin(X_{i+1} - \frac{(X_{i+1} + X_i)^{C2_i} + |X_{i+1}| - X_{i+1} - X_i + C3_i \times X_i)}{3}))|$$

where :

$$C1 = [-2.71828183, -0.7]$$

$$C2 = [-2]$$

$$C3 = [5.]$$

99

$$f_{244}(X) = \sum_{i=0}^{n-2} (\tanh(\frac{-(e^{X_i} + \sqrt{X_{i+1}})}{||||(X_i)^{C1_i} + e^{X_{i+1}}| + X_{i+1}| + e^{X_{i+1}}| + e^{X_{i+1}}| + e^{X_{i+1}}|}))$$

where :

$$C1 = [2]$$

$$f_{245}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (\tanh(\frac{X_i \times X_i}{X_i \times C1_i})) \times \log \frac{1}{n-1} \sum_{i=0}^{n-2} (e^{-(X_i)} + e^{\sqrt{X_i}} + \sqrt{|X_{i+1}|} - e^{-(X_i)})$$

where :

$$C1 = [-9., 7.]$$

$$f_{246}(X) = \log \left(\frac{1}{n-1} \sum_{i=0}^{n-2} (-(|\sqrt{e^{X_{i+1}+X_i}}|)) \right)^{-2}$$

$$f_{247}(X) = \log \sqrt{\sum_{i=0}^{n-2} (\sqrt{|e^{\frac{X_{i+1}+X_i+X_i}{3}}|})}$$

$$f_{248}(X) = \frac{1}{n-1} \sum_{i=0}^{n-2} (\log \sqrt{(e^{-(\frac{X_{i+1}+X_i}{2} + \frac{X_{i+1}}{C1_i} - X_i - X_i + X_{i+1}) - X_{i+1} - C2_i})^{C3_i}})$$

where :

$$\begin{aligned} C1 &= [-50.] \\ C2 &= [0.6] \\ C3 &= [-2] \end{aligned}$$

$$f_{249}(X) = |-(\sum_{i=0}^{n-1} (-(\frac{X_i}{C1_i} - X_i - C2_i) - C3_i)))|$$

where :

$$\begin{aligned} C1 &= [7., -1., -0.9, 6., -31.41592654] \\ C2 &= [2.71828183, 3.14159265, -0.6, 1., 0.3] \\ C3 &= [8., 27.18281828, -6., 2.71828183, 31.41592654] \end{aligned}$$

$$f_{250}(X) = \frac{1}{n} \sum_{i=0}^{n-1} (X_i - C1_i) \times \tanh(\frac{1}{n} \sum_{i=0}^{n-1} ((e^{|\sqrt{X_i}|})^{C2_i}))$$

where :

$$C1 = [-0.1, 0.4, -3.14159265, 3., -1., 0.5, -2.71828183, 0.5, -0.8, 0.9]$$

$$C2 = [3, 2, 2, 3, 2, 3, -2, -2, -3, 2]$$

$$f_{251}(X) = -(\frac{1}{n} \sum_{i=0}^{n-1} (-(X_i + C1_i))) + \tanh(\sum_{i=0}^{n-1} (\frac{e^{X_i} + X_i \times X_i - C2_i + |X_i|}{2}))$$

where :

$$C1 = [-1., -2., -3., -3.14159265, -0.8, 1., -0.6, 2.71828183, 4., 0.1]$$

$$C2 = [-0.4, -0.3, 0.3, 0.27182818, -0.6, -3.14159265, -0.3, -0.3, -0.31415927, 0.5]$$

$$f_{252}(X) = \tanh(\sum_{i=0}^{n-1} (|e^{\frac{X_i + X_i + X_i + X_i}{4}}|)) \times \sum_{i=0}^{n-1} (C1_i - X_i)$$

where :

$$C1 = [-4.00000000e + 02, -2.00000000e + 02, 2.00000000e - 01, 7.00000000e - 01, 3.14159265e + 02, -9.00000000e + 00, 3.14159265e + 00, 9.00000000e + 02, 2.00000000e + 03, 9.00000000e + 02]$$

$$f_{253}(X) = -(\frac{1}{n} \sum_{i=0}^{n-1} (-(\frac{X_i - -(\frac{X_i}{C1_i})}{C2_i}))) + \tanh(\sum_{i=0}^{n-2} (|e^{\sqrt{X_i}}| + X_i + X_{i+1}))$$

where :

$$C1 = [-27.18281828, 8., 5., 10., -7., -30., -10., -6., -10., 40.]$$

$$C2 = [-27.18281828, 8., 5., 10., -7., -30., -10., -6., -10., 40.]$$

$$f_{254}(X) = (\tanh(\frac{1}{n-1} \sum_{i=0}^{n-2} (e^{X_{i+1} \times X_i \times C1_i + \frac{X_i}{X_{i+1}} \times X_i + X_i} \times e^{X_i + X_{i+1}})))^{-2}$$

where :

$$C1 = [-6., -27.18281828, -3.14159265, -30., -0.7, -4., 20., -0.8, 7.]$$

$$f_{255}(X) = \frac{(\frac{1}{n} \sum_{i=0}^{n-1} (e^{X_i - C1_i \times X_i \times X_i} \times X_i + C2_i + \log X_i + -(X_i) \times e^{\cos(X_i)} \times |X_i|))^{-3}}{-(\sum_{i=0}^{n-2} (e^{-(\cos(X_i))} \times \tanh((X_{i+1})^{C3_i} + \sqrt{X_{i+1}})))}$$

where :

$$C1 = [-0.1, 1., -0.3, 0.9, 0.9, -3., 0.8, -3., -0.5, -0.2]$$

$$C2 = [0.3, 0.2, -0.27182818, 0.4, 0.7, -0.31415927, 0.4, -3.14159265, -0.4, 0.27182818]$$

$$C4 = [2, -3, -2, -2, 3, -2, 2, 3, 2]$$

$$f_{256}(X) = (\tanh(\sum_{i=0}^{n-2} (\frac{|\frac{-(\sqrt{C1_i} \times X_i)|}{\sqrt{-(X_{i+1}) + \frac{X_{i+1} - X_i}{e^{X_i}}}}}{2} - |\frac{X_{i+1} + X_{i+1} + X_i + X_{i+1}}{4}| \times \sqrt{C2_i \times X_i} \times -(\frac{|\frac{-(X_i)}{-(X_{i+1})}|}{\sqrt{-(X_{i+1}) + \frac{X_{i+1} - X_i}{e^{X_i}}}})))))^{-3}$$

where :

$$C1 = [1., 31.41592654, 2.71828183, -10., -20., 8., 9., -0.9, 3.]$$

$$C2 = [1., 31.41592654, 2.71828183, -10., -20., 8., 9., -0.9, 3.]$$