

$$X_n = X_{n-1} - \frac{f(X_{n-1})}{f'(X_{n-1})}$$

$$f(X_n) \approx f(X_{n-1}) + f'(X_{n-1})(X_n - X_{n-1})$$

$$f(x) = 2510 \left(\frac{\ln(4.8 \times 10^6)}{2.8 \times 10^6 - 13.3 \times 10^3 x} \right) - 9.8/x - 335$$

$$f'(x) = \frac{47670}{-19x + 4300} - 9.81$$

$$\begin{aligned} 1) \quad X_{n-1} &= X_0 = 0 & f(0) &= -335 \\ X_1 &= X_n = X_{n-1} - \frac{f(X_{n-1})}{f'(X_{n-1})} & f'(0) &= 2.112499 \\ X_0 - \frac{f(0)}{f'(0)} &= 0 - \frac{-335}{2.112499} = 0 - (-158.5798817) \\ X_1 &= 158.57988 \end{aligned}$$

$$\begin{aligned} 2) \quad X_{n-1} &= X_1 = 158.57988 & f(X_1) &= 1621.819302 \\ X_n &= X_2 = X_1 - \frac{f(X_1)}{f'(X_1)} & f'(X_1) &= 38.509005 \\ X_2 &= 158.57988 - \frac{1621.819302}{38.509005} = 158.57988 - 42.11533 \\ X_2 &= 116.46456 \end{aligned}$$

$$\begin{aligned} 3) \quad X_{n-1} &= X_2 = 116.46456 & f(X_2) &= 544.68697 \\ X_n &= X_3 = X_2 - \frac{f(X_2)}{f'(X_2)} & f'(X_2) &= 16.87456 \\ X_3 &= 116.46456 - \frac{544.68697}{16.87456} = 116.46456 - 32.27852 \\ X_3 &= 84.18603 \end{aligned}$$

$$\textcircled{9} \quad \begin{aligned} X_{n-1} &= X_3 = 84,18603 & f(X_3) &= 129,82069 \\ X_n &= X_4 = X_3 - \frac{f(X_3)}{f'(X_3)} & f'(X_3) &= 10,95678 \end{aligned}$$

$$X_4 = 84,18603 - \frac{129,82069}{10,95678} = 84,18603 - 12,01361$$

$$X_4 = 72,17242$$

$$\textcircled{9} \quad \begin{aligned} X_{n-1} &= X_4 = 72,17242 & f(X_4) &= 10,67601 \\ X_n &= X_5 = X_4 - \frac{f(X_4)}{f'(X_4)} & f'(X_4) &= 8,33189 \end{aligned}$$

$$X_5 = 72,17242 - \frac{10,67601}{8,33189} = 72,17242 - 1,28134$$

$$X_5 = 70,89108$$

$$\textcircled{9} \quad \begin{aligned} X_{n-1} &= X_5 = 70,89108 & f(X_5) &= 0,10698 \\ X_n &= X_6 = X_5 - \frac{f(X_5)}{f'(X_5)} & f'(X_5) &= 8,16541 \end{aligned}$$

$$X_6 = 70,89108 - \frac{0,10698}{8,16541} = 70,89108 - 0,013102$$

$$X_6 = 70,87797$$