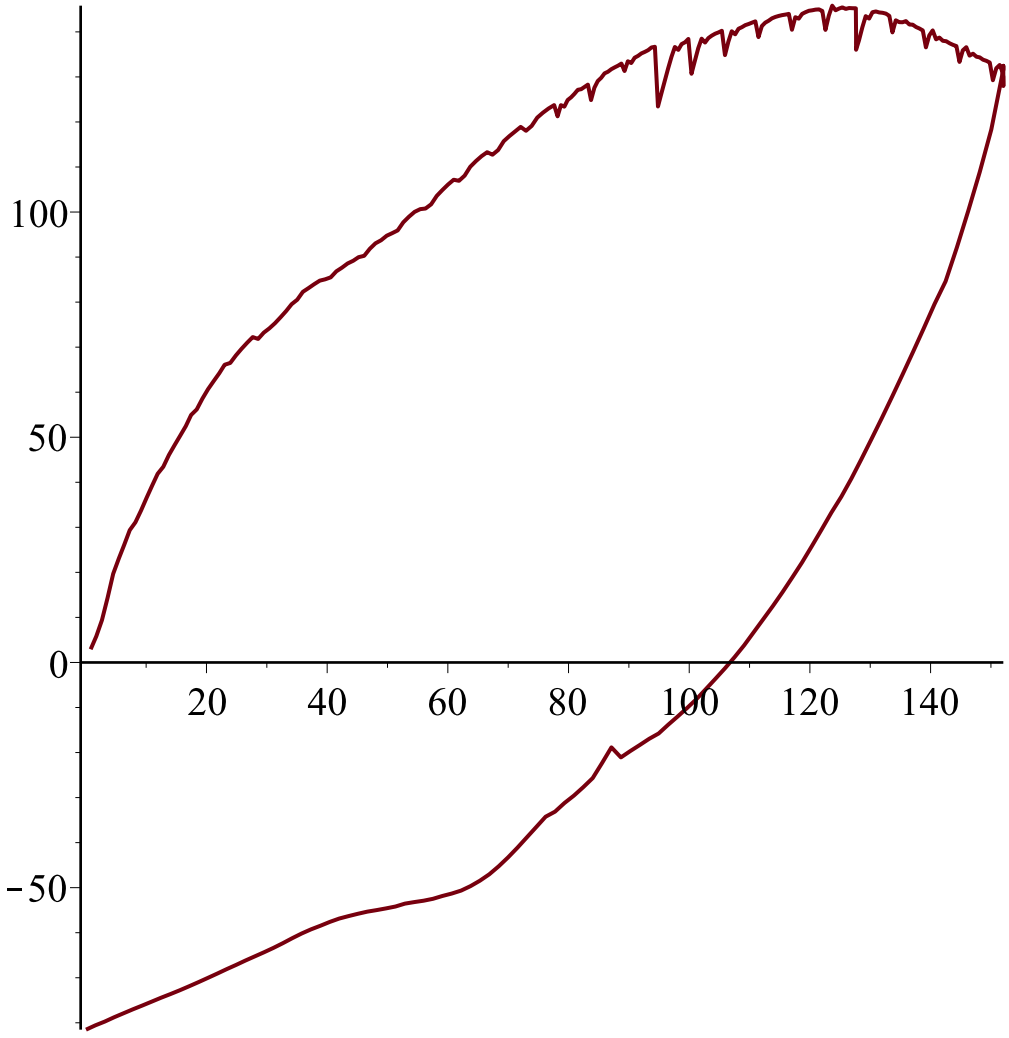
```
dataSY1
    := ExcelTools[Import]("D:\\Structural Engineering\\Beam-CFSConnection\\MTS Data\\SY1
    -1ExpLoadDisp.xlsx")
```

$$\begin{bmatrix} 1..334 \text{ x } 1..4 \text{ Array} \\ \text{Data Type: anything} \\ \text{Storage: rectangular} \\ \text{Order: Fortran\_order} \end{bmatrix} \quad (1)$$

```
p1 := plot(dataSY1(1..-1, 1)·(1 − 0.075), dataSY1(1..-1, 2))
```



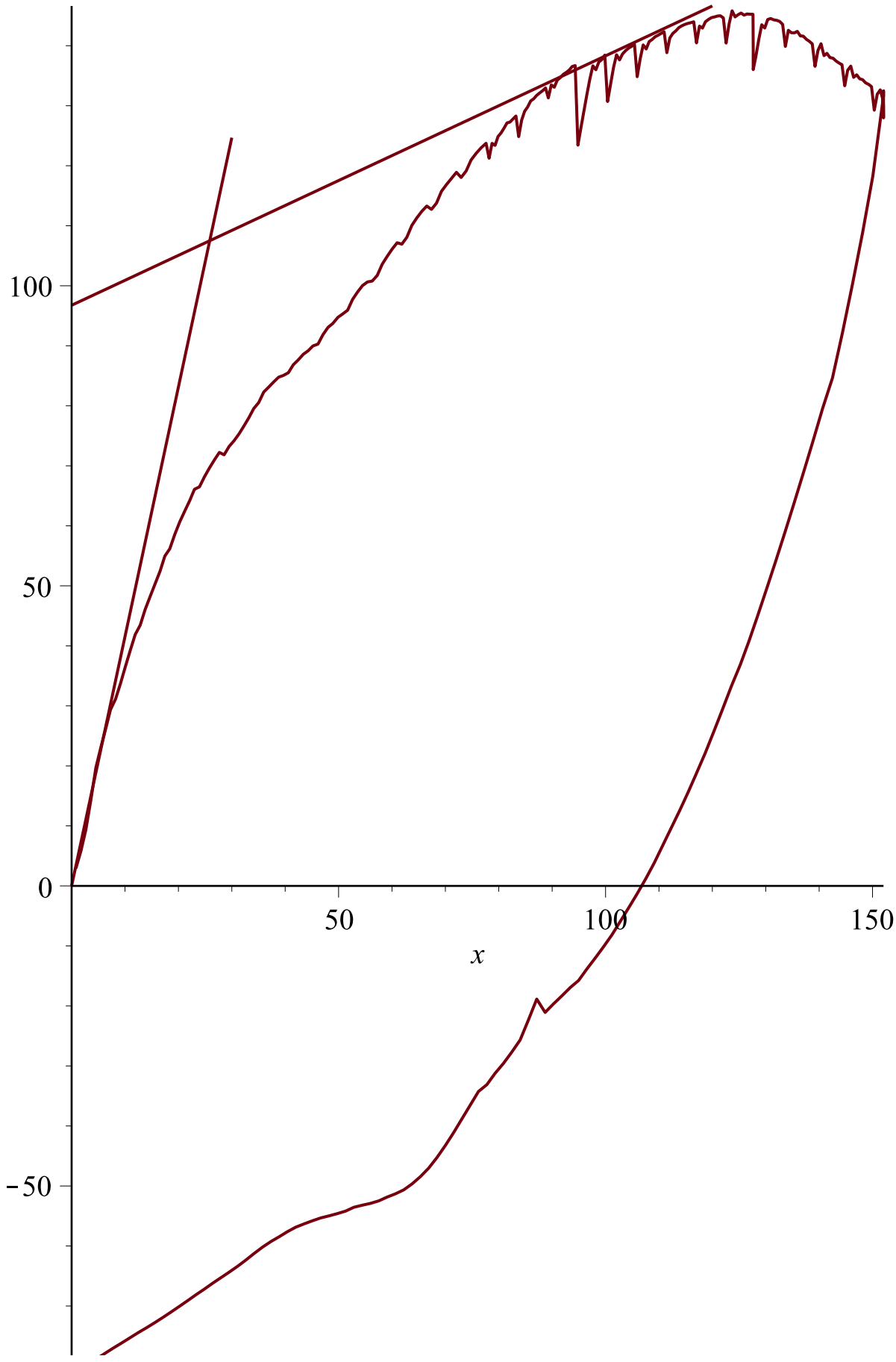
$$k1 := \frac{\text{dataSY1}(5, 2) - dataSY1(1, 2)}{\text{dataSY1}(5, 1) - dataSY1(1, 1)}$$

$$4.155942826 \quad (2)$$

$$k2 := 0.1 \cdot k1$$

$$0.4155942826 \quad (3)$$

```
p2 := plot(k1·x, x = 0..30) :
p3 := plot(k2·(x − 80) + 130, x = 0..120) :
plots[display](p1, p2, p3)
```


100
50
0
-50
50
100
150
x

$sol := solve(k1 \cdot x = k2 \cdot (x - 80) + 130)$

$$25.86723036 \quad \textbf{(4)}$$

$sol \cdot k1$

$$107.5027304 \quad \textbf{(5)}$$