

8.5000-19.6331
8.6000-19.8472
8.7000-20.0591
8.8000-20.2086
8.9000-20.4758
9.0000-20.6808
9.1000-20.8830

5.4000-12.8031
5.5000-12.3031
5.6000-12.5688
5.7000-12.8235
5.8000-18.0473
5.9000-13.3620
6.0000-13.6216
6.1000-13.8820
6.2000-13.1412
6.3000-14.3996
6.4000-14.6555
6.5000-14.9105
6.6000-14.9105
6.7000-15.1640
6.8000-15.4160
7.0000-15.6664
7.1000-16.4037
7.2000-16.6509
7.3000-16.8923
7.4000-17.1322
7.5000-17.3700
7.6000-17.6058
7.7000-17.8396
7.8000-18.0713
7.9000-18.3009
8.0000-18.5284
8.1000-18.7538
8.2000-18.9770
8.3000-19.1929
8.4000-19.4166

6.1000-13.8820
6.2000-13.1412
6.3000-14.3996
6.4000-14.6555
6.5000-14.9105
6.6000-14.9105
6.7000-15.1640
6.8000-15.4160
7.0000-15.6664
7.1000-16.4037
7.2000-16.6509
7.3000-16.8923
7.4000-17.1322
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7.7000-17.8396
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7.9000-18.3009
8.0000-18.5284
8.1000-18.7538
8.2000-18.9770
8.3000-19.1929
8.4000-19.4166

The model equation $y = \sin(x + \text{const})$

$$+ 2\pi \cdot \text{const} - 2\pi \cdot \frac{t}{L} + 0 \leq t \leq 10 \text{ hrs}$$

Data will be

$$t = 0 \dots 10$$

$$y = \sin(2\pi \cdot 25 \cdot \pi \cdot t) + 2\pi \cdot \text{const} + \text{Exp}(0.85 \cdot t) - 2\pi \cdot \cos(0.1 \cdot t)$$

Plot (t, y)

(t, y)

$$0 - 1.0000$$

$$0.1000 - 0.8555$$

$$0.2000 - 0.7024$$

$$0.3000 - 0.5413$$

$$0.4000 - 0.3726$$

$$0.5000 - 0.1969$$

$$0.6000 - 0.0116$$

$$0.7000 - 0.1733$$

$$0.8000 - 0.3661$$

$$0.9000 - 0.5679$$

$$1.0000 - 0.7727$$

$$1.1000 - 0.9824$$

$$1.2000 - 1.1966$$

$$1.3000 - 1.4150$$

$$1.4000 - 1.6375$$

$$1.5000 - 1.8637$$

$$1.6000 - 2.0935$$

$$1.7000 - 2.3266$$

$$1.8000 - 2.5628$$

$$1.9000 - 2.8024$$

$$2.0000 - 3.0441$$

$$2.1000 - 3.2887$$

$$2.2000 - 3.5358$$

$$2.3000 - 3.7852$$

$$2.4000 - 4.0367$$

$$2.5000 - 4.2903$$

$$2.6000 - 4.5458$$

$$2.7000 - 4.8030$$

$$2.8000 - 5.0614$$

$$2.9000 - 5.3223$$

$$3.0000 - 5.5846$$

$$3.1000 - 5.8473$$

$$3.2000 - 6.1116$$

$$3.3000 - 6.3770$$

$$3.4000 - 6.6433$$

$$3.5000 - 6.9106$$

$$3.6000 - 7.1787$$

$$3.7000 - 7.4474$$

$$3.8000 - 7.7167$$

$$3.9000 - 7.9866$$

$$4.0000 - 8.2568$$

$$4.1000 - 8.5272$$

$$4.2000 - 8.7978$$

$$4.3000 - 9.0686$$

$$4.4000 - 9.3396$$

$$4.5000 - 9.6108$$

$$4.6000 - 9.8822$$

$$4.7000 - 10.1538$$

$$4.8000 - 10.4256$$

$$4.9000 - 10.6976$$

$$5.0000 - 10.9698$$

$$5.1000 - 11.2422$$

$$5.2000 - 11.5148$$

$$5.3000 - 11.7876$$

Karlsruhe, Benedikt I

181609066036

Mechanik

$$\begin{cases} x_1 - 2x_2 - x_3 = 10 \\ 2x_1 + 3x_2 + x_4 = 8 \\ x_1 - 4x_3 - 2x_4 = 3 \\ -x_2 + 2x_3 + x_4 = -7 \end{cases}$$

$$A = \begin{pmatrix} 1 & -2 & -1 & 0 \\ 2 & 3 & 0 & 1 \\ 1 & 0 & -4 & -2 \\ 0 & -1 & 2 & 1 \end{pmatrix}$$

$$C = \begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix} \quad D = \begin{pmatrix} 0.2267 & 0.2200 & 0.4913 & 0.6667 \\ -0.0933 & 0.1600 & -0.2267 & -0.313 \\ -0.1067 & 0.0000 & 0.0261 & 0.3333 \\ 0.2267 & 0.0400 & -0.3061 & -0.3333 \end{pmatrix}$$

$$E = \begin{pmatrix} -1.0000 \\ 2.0000 \\ -3.0000 \\ 4.0000 \end{pmatrix}$$

