```
W := Matrix([[-1, 0,-1], [-1,-1, 0],
  [0, 1, 1]])
```

$$W := \begin{bmatrix} -1 & 0 & -1 \\ -1 & -1 & 0 \\ 0 & 1 & 1 \end{bmatrix} \quad (1)$$

```
T := Matrix([[x2 - x1, x3 - x1, x4 - x1],
  [y2 - y1, y3 - y1, y4 - y1], [z2 - z1, z3
  - z1, z4 - z1]])
```

$$T := \begin{bmatrix} x2 - x1 & x3 - x1 & x4 - x1 \\ y2 - y1 & y3 - y1 & y4 - y1 \\ z2 - z1 & z3 - z1 & z4 - z1 \end{bmatrix} \quad (2)$$

```
F := Matrix([[1, 1, 1], [-1, 0, 0], [0,
  -1, 0]])
```

$$F := \begin{bmatrix} 1 & 1 & 1 \\ -1 & 0 & 0 \\ 0 & -1 & 0 \end{bmatrix} \quad (3)$$

```
A := T.(W^-1)
```

$$A := \left[\left[-\frac{x2}{2}+\frac{x1}{2}+\frac{x3}{2}-\frac{x4}{2}, -\frac{x2}{2}+\frac{x1}{2}-\frac{x3}{2}+\frac{x4}{2}, -\frac{x2}{2}-\frac{x1}{2}+\frac{x3}{2}+\frac{x4}{2}\right], \left[-\frac{y2}{2}+\frac{y1}{2}+\frac{y3}{2}-\frac{y4}{2}, -\frac{y2}{2}+\frac{y1}{2}-\frac{y3}{2}+\frac{y4}{2}, -\frac{y2}{2}-\frac{y1}{2}+\frac{y3}{2}+\frac{y4}{2}\right], \left[-\frac{z2}{2}+\frac{z1}{2}+\frac{z3}{2}-\frac{z4}{2}, -\frac{z2}{2}+\frac{z1}{2}-\frac{z3}{2}+\frac{z4}{2}, -\frac{z2}{2}-\frac{z1}{2}+\frac{z3}{2}+\frac{z4}{2}\right]\right] \quad (4)$$

$$X := \mathrm{Vector}([[x],[y],[z]])$$

$$X := \begin{bmatrix} x \\ y \\ z \end{bmatrix} \quad (5)$$

$$f := A \cdot X$$

$$f := \left[\left[\left(-\frac{x2}{2}+\frac{x1}{2}+\frac{x3}{2}-\frac{x4}{2}\right)x + \left(-\frac{x2}{2}\right.\right. \quad (6)$$

$$+\frac{x1}{2}-\frac{x3}{2}+\frac{x4}{2}\Big)\ y+\Big(-\frac{x2}{2}-\frac{x1}{2}+\frac{x3}{2}$$
$$+\frac{x4}{2}\Big)\ z\Big],$$
$$\Big[\Big(-\frac{y2}{2}+\frac{y1}{2}+\frac{y3}{2}-\frac{y4}{2}\Big)\ x+\Big(-\frac{y2}{2}+\frac{y1}{2}$$
$$-\frac{y3}{2}+\frac{y4}{2}\Big)\ y+\Big(-\frac{y2}{2}-\frac{y1}{2}+\frac{y3}{2}$$
$$+\frac{y4}{2}\Big)\ z\Big],$$
$$\Big[\Big(-\frac{z2}{2}+\frac{z1}{2}+\frac{z3}{2}-\frac{z4}{2}\Big)\ x+\Big(-\frac{z2}{2}+\frac{z1}{2}$$
$$-\frac{z3}{2}+\frac{z4}{2}\Big)\ y+\Big(-\frac{z2}{2}-\frac{z1}{2}+\frac{z3}{2}$$
$$+\frac{z4}{2}\Big)\ z\Big]\Big]$$

$J := \mathit{VectorCalculus}[\mathit{Jacobian}](f, [x, y, z])$

$$J := \Big[\Big[-\frac{x2}{2}+\frac{x1}{2}+\frac{x3}{2}-\frac{x4}{2},\ -\frac{x2}{2}+\frac{x1}{2}$$ (7)

$$-\frac{x3}{2}+\frac{x4}{2},\ -\frac{x2}{2}-\frac{x1}{2}+\frac{x3}{2}+\frac{x4}{2}\Bigg],$$
$$\Bigg[-\frac{y2}{2}+\frac{y1}{2}+\frac{y3}{2}-\frac{y4}{2},\ -\frac{y2}{2}+\frac{y1}{2}-\frac{y3}{2}$$
$$+\frac{y4}{2},\ -\frac{y2}{2}-\frac{y1}{2}+\frac{y3}{2}+\frac{y4}{2}\Bigg],$$
$$\Bigg[-\frac{z2}{2}+\frac{z1}{2}+\frac{z3}{2}-\frac{z4}{2},\ -\frac{z2}{2}+\frac{z1}{2}-\frac{z3}{2}$$
$$+\frac{z4}{2},\ -\frac{z2}{2}-\frac{z1}{2}+\frac{z3}{2}+\frac{z4}{2}\Bigg]\Bigg]$$