

$$A := \text{Matrix}\left(\left[\left[\frac{1}{x}, 0, 0\right], \left[3, -\frac{1}{x}, 0\right], [0, 0, 1]\right]\right)$$

$$\begin{bmatrix} \frac{1}{x} & 0 & 0 \\ 3 & -\frac{1}{x} & 0 \\ 0 & 0 & 1 \end{bmatrix} \quad (1)$$

$$\text{Satellite-Testing}(A, \{1\}, 2) \quad \text{true} \quad (2)$$

$$\text{Satellite-Testing}(A, \{1\}, 3) \quad \text{FAIL} \quad (3)$$

$$\text{Satellite-Testing}(A, \{3\}, 1) \quad \text{true} \quad (4)$$

$$\text{Satellite-Determination}(A, \{1\}) \quad [\{2\}, \{3\}, \{\}] \quad (5)$$

$$\text{Satellite-Determination}(A, \{2\}) \quad [\{1\}, \{3\}, \{\}] \quad (6)$$

$$\text{Satellite-Determination}(A, \{3\}) \quad [\{1, 2\}, \{\}, \{\}] \quad (7)$$

$$A2, A1, A0 := \text{Matrix}([[x, 0], [0, 0]]), \text{Matrix}([[1, x], [1, 0]]), \text{Matrix}([[0, 1], [x, x]])$$

$$\begin{bmatrix} x & 0 \\ 0 & 0 \end{bmatrix}, \begin{bmatrix} 1 & x \\ 1 & 0 \end{bmatrix}, \begin{bmatrix} 0 & 1 \\ x & x \end{bmatrix} \quad (8)$$

$$\text{Satellite-Determination}([A2, A1, A0], \{1\}) \quad [\{2\}, \{\}, \{\}] \quad (9)$$

$$\text{Satellite-LinSatTesting}(A, \{1\}, 2) \quad \text{false} \quad (10)$$

$$\text{Satellite-LinSatTesting}(A, \{2\}, 1) \quad \text{true} \quad (11)$$

$$\text{Satellite-LinSatTesting}(A, \{3\}, 1) \quad \text{false} \quad (12)$$

$$\text{Satellite-LinearlySatellite}(A, \{1\}) \quad \{\} \quad (13)$$

$$\text{Satellite-LinearlySatellite}(A, \{2\}) \quad \{1\} \quad (14)$$

$$\text{Satellite-LinearlySatellite}(A, \{3\}) \quad \{\} \quad (15)$$