

実習7.1

(1)

> solve({x + 2·y = 1, 3·x + 5·y = 4}, {x, y})
 $\{x = 3, y = -1\}$ (1)

(2)

> solve({x + 2·y = 3, 2·x + 4·y = 6}, {x, y})
 $\{x = 3 - 2y, y = y\}$ (2)

(3)

> solve({x + 2·y = 3, 2·x + 4·y = 7}, {x, y})
> 1·4 - 2·2
0 (3)

解なし (係数行列の行列式 = 0 となることが確認できます。)

(4)

> solve({2·x + 2·y + z = 2, x - y + 2·z = -2, 3·x - 2·y - 3·z = 1}, {x, y, z})
 $\left\{x = \frac{1}{3}, y = 1, z = -\frac{2}{3}\right\}$ (4)

(5)

> solve({x + 2·y + 4·z = 1, 3·x + 5·y + z = 4, 4·x + y + 2·z = 2}, {x, y, z})
 $\left\{x = \frac{3}{7}, y = \frac{4}{7}, z = -\frac{1}{7}\right\}$ (5)

(6)

> solve({4·x + 2·y + z - u = 5, x + 2·y - 3·z + u = 7, 3·x - y + z + u = 8, -x - y + z + u = 4}, {x, y, z, u})
 $\left\{u = \frac{59}{10}, x = 1, y = \frac{13}{5}, z = \frac{17}{10}\right\}$ (6)