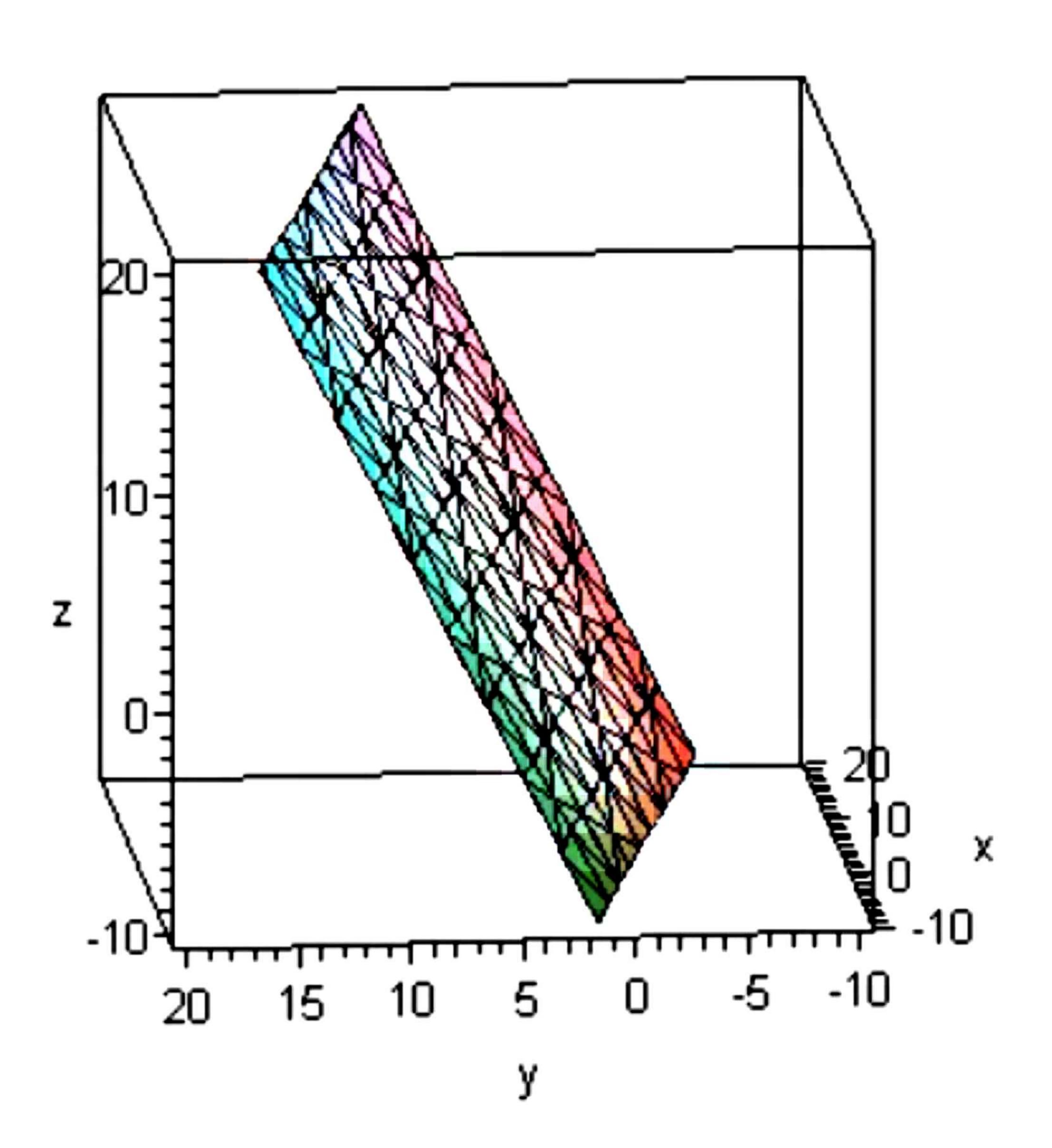
>
$$with(geom3d)$$
, $with(plots)$:

 $point(M, 1, 2, -4)$
 M
 $n := \langle 1, 4, -2 \rangle$

$$\begin{bmatrix} 1 \\ 4 \\ -2 \end{bmatrix}$$
 $plane(Pl, [M, n])$
 Pl
 $pl := Equation(Pl, [x, y, z])$
 $-17 + x + 4y - 2z = 0$

> implicit plot 3d(p1, x = -10..20, y = -10..20, z = -10..20)



>
$$point(A, 1, 2, 1), point(B, -2, 1, 0), point(C, 0, 1, 3)$$

$$A, B, C$$

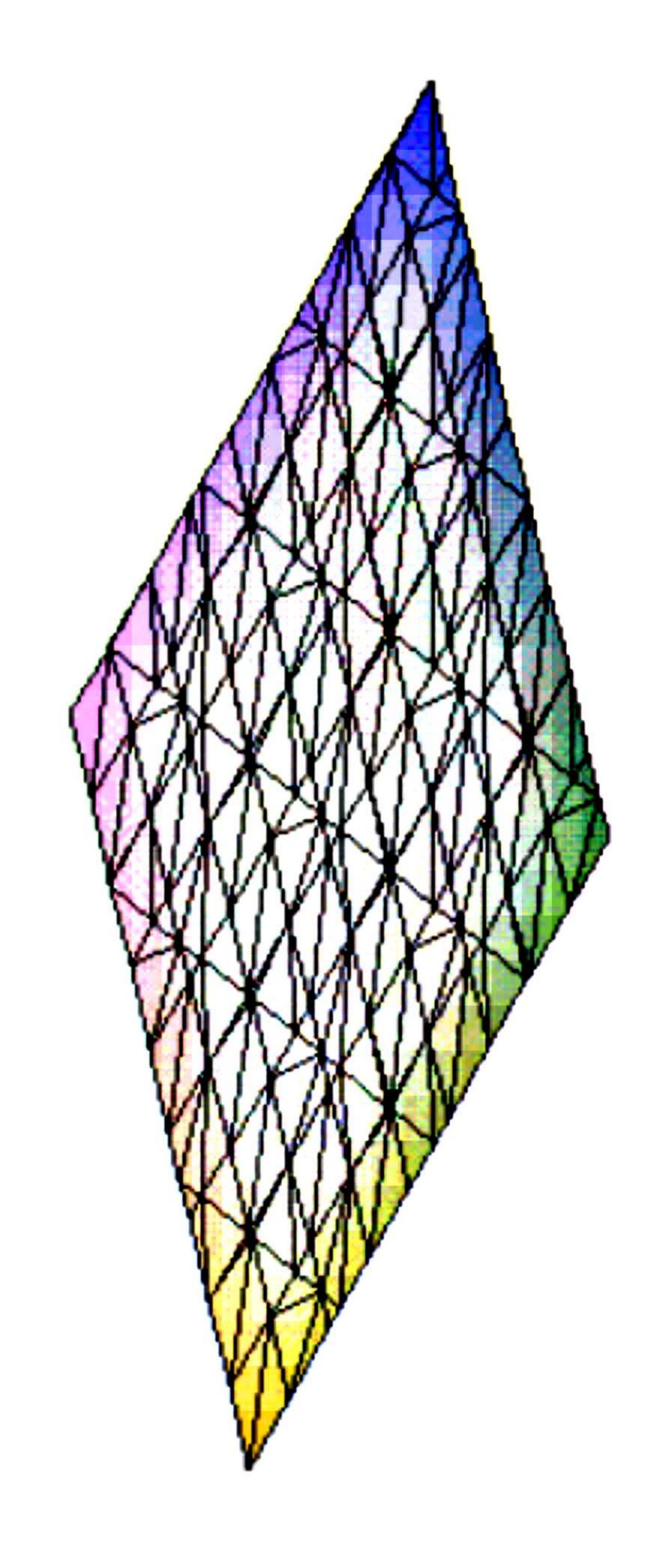
$$plane(P2, [A, B, C])$$

$$P2$$

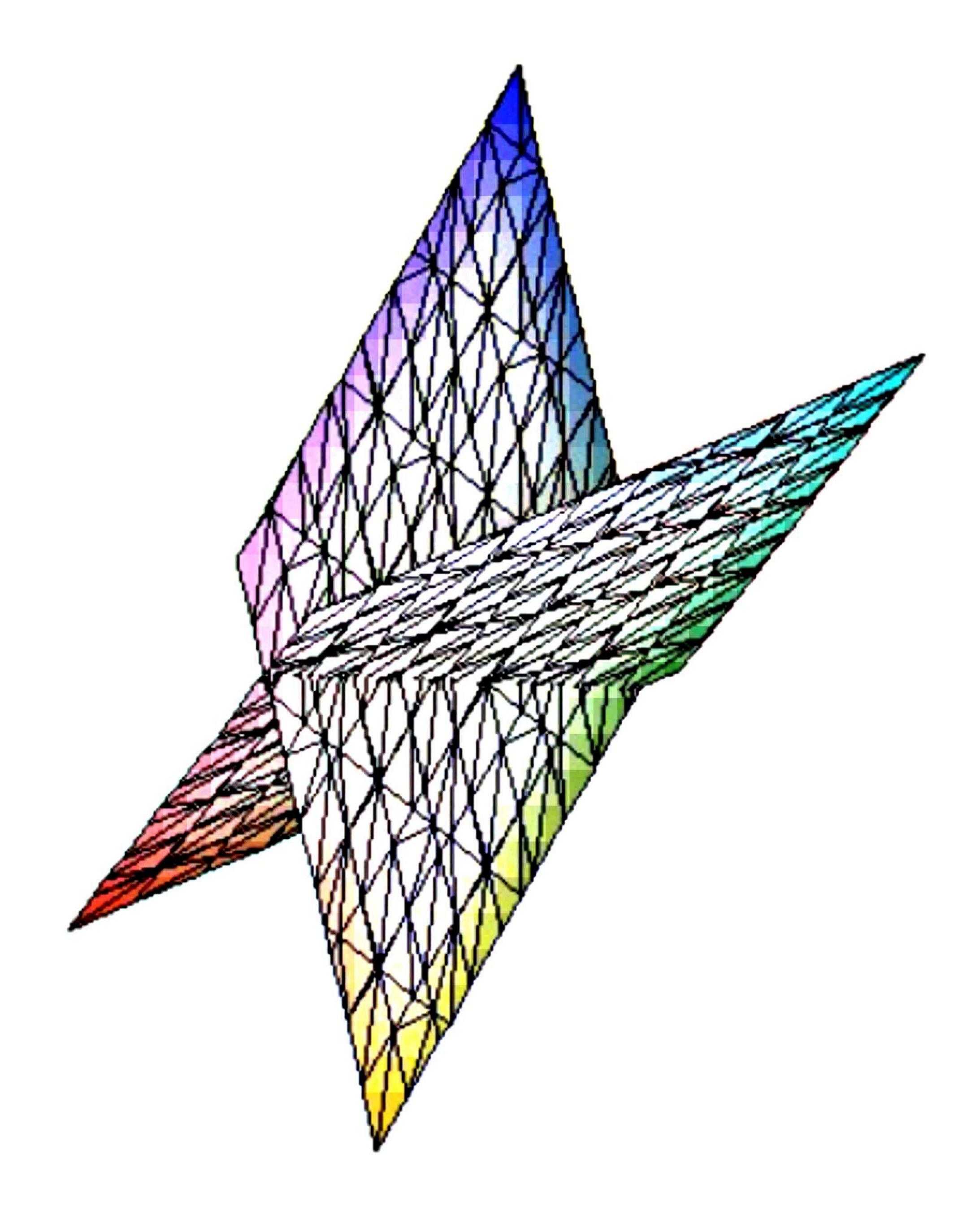
$$p2 := Equation(P2, [x, y, z])$$

$$-13 - 3x + 7y + 2z = 0$$

$$implicit plot 3d(p2, x = -10..20, y = -10..20, z = -10..20)$$



> implicitplot3d($\{p1, p2\}, x = -10 ... 20, y = -10 ... 20, z = -10 ... 20);$



> distance (M, P2)

 $\frac{5}{31}\sqrt{62}$

FindAngle (P1, P2)

 $\arccos\left(\frac{1}{62}\sqrt{21}\sqrt{62}\right)$

> point(M, 2, -1, 3)

$$v := [1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[1,-1,5]$$

$$[2+t,-1-t,3+5t]$$

$$[2+t,-1-t,3+5t]$$

$$[3+2t,-1+5t,2]$$

$$[3+2t,-1+$$

plane $(p3, -x + 2 \cdot y + z - 4 = 0, [x, y, z])$

р3

d3

Equation (d3, t)

[-2+5t, 1-t, 7t]