$$aX + bY + cZ + d = 0$$

$$\vec{AB} = \begin{vmatrix} Bx - Ax \\ By - Ay \\ Bz - Az \end{vmatrix} \vec{AC} = \begin{vmatrix} Cx - Ax \\ Cy - Ay \\ Cz - Az \end{vmatrix}$$

$a = \vec{AB}_2 * \vec{AC}_3 - \vec{AB}_3 * \vec{AC}_2$
$b = \vec{AB}_3 * \vec{AC}_1 - \vec{AB}_1 * \vec{AC}_3$
$c = \vec{AB}_1 * \vec{AC}_2 - \vec{AB}_2 * \vec{AC}_1$
$d = -(aAx + bAy + cAz)$

A = -5, 1, -4
B = -5, 1, 1
C = -5, -1, 1
D = -5, -1, -4

$$\vec{AB} = \begin{vmatrix} -5 - -5 \\ 1 - 1 \\ 1 - -4 \end{vmatrix} \vec{AC} = \begin{vmatrix} -5 - -5 \\ -1 - 1 \\ 1 - -4 \end{vmatrix}$$

$$\vec{AB} = \begin{vmatrix} 0 \\ 0 \\ -5 \end{vmatrix} \vec{AC} = \begin{vmatrix} 0 \\ -2 \\ -5 \end{vmatrix}$$

$a = (0 * -5) - (-5 * -2) = 10$
$b = (-5 * 0) - (0 * -5) = 0$
$c = (0 * -2) - (0 * 0) = 0$
$d = -(10 * -5 + 0 * 1 + 0 * -4) = 50$

$10x + 50 = 0$

$$\sqrt{a^2 + b^2 + c^2}$$

$$\sqrt{10^2} = 10$$

$$\frac{ax+by+cz+d}{\sqrt{a^2+b^2+c^2}} < r$$

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2} < r_2 + r_1$$