

Geometry 1e – Practice

10th and 11th class – 18/25.11.2025.

- Give the intersection of
 - $x - 1 = -\frac{y+1}{2} = \frac{z}{6}$ and $2x + 3y + z = 1$,
 - $\left. \begin{array}{l} x = 1 + 2t \\ y = -2 + 3t \\ z = 4 + 6t \end{array} \right\}$ and $6x + 9y - 3z = 18$,
 - $x - 2y + 3z = 4$ and $3x + 2y - 5z = 4$,
 - $2x - y + 3z = 5$, $3x + y + 2z = 1$ and $4x + 3y + z + 2 = 0$.
- Let us be given the points $A(2,1,3)$, $B(-1,2,1)$, $C(0,3,1)$ and $D(1,-2,-3)$. Determine the volume, the circumcenter and radius and the a_{ACD} altitude of $ABCD$ tetrahedron.
- Give the equation of l , if $Q(-3,1,1)$ lies on it, $2x + y - 8z + 3 = 0$ is parallel and $\frac{x}{4} = \frac{y+6}{2} = z$ is orthogonal to it.
- Show that $\frac{x+7}{3} = \frac{y-5}{-1} = \frac{z-9}{4}$ is parallel to both $2x + 2y - z = 10$ and $x - y - z = 22$.
- Give the equation of the plane that is passing through $P(-2,1,3)$ if it is parallel to both $x - y + 3z = 8$ and $2x + y - z + 2 = 0$.
- Give the equation of the plane that is orthogonal to $3x + 2y - z = 5$ and contains $\frac{x-1}{2} = \frac{y+2}{-3} = \frac{z-2}{2}$.
- Determine the equation of the line, that is passing through $P(-1,0,3)$, intersects $\frac{x-3}{2} = y = z - 1$ and it is orthogonal to $\frac{x}{2} = -y = -\frac{z+3}{7}$.
- Give the equation of a line such that its distance to planes $x - 8y + 4z - 9 = 0$ and $4x + 20y - 5z - 42 = 0$ are 3 and 4 unitst, respectively.