Geometry 1e – Practice

5th class – 14.10.2025.

1. Determine the equation of a circle with center $C(u, v)$ and radius r.
2. Determine the equation of the circle, where AB is a diameter. $A(-1,-1), B(7,5)$
3. Determine the center and the radius of the circle with equation:
   a. $x^2 + y^2 - 6x + 10y - 2 = 0$
   b. $x^2 + y^2 - 12x - 12y = 25$
   c. $x^2 + y^2 + 3x - 7y + 14.5 = 0$
4. Determine the circumcirce of ABC_Δ, where $A(-2,-1), B(6,-3)$ and $C(2,5)$.
5. Determine the mutual position of the circle $(x-3)^2 + (y-1)^2 = 25$ and the lines:
   a. $e: x = 9$
   b. $f: 4y - 3x + 30 = 0$
   c. $g: x - 2y + 4 = 0$
6. What are the equations of the tangents, drawn from
   a. $P(10,24)$ to $(x-5)^2 + (y-12)^2 = 169$
   b. $Q(14,7)$ to $(x+1)^2 + (y-2)^2 = 25$
7. Determine the mutual position of the circles with equations:
   $c_1: x^2 + y^2 - 4x - 2y - 20 = 0$ and $c_2: (x+6)^2 + (y+5)^2 = 25$
8. The endpoints of a segment is $A(-3,-1), B(7,3)$. Determine the locus of points on the ordinate(y) axis from which the segment is seen at right angle.