

## LDDR Niveau 1: TE 9 Geometrie Plan

1MG Level 1

### PLANE GEOMETRY

2017-06-16

60 mn

Name: \_\_\_\_\_

**With calculator. Indicate your computations**

#### EXERCISE 1 [ / 3 ]

Give the equation of the smallest circle that passes through the points  $A(-5; 4)$  and  $B(11; -26)$ .

#### EXERCISE 2 [ / 4 ]

Find the intersection points of the circle  $(x - 2)^2 + (y + 1)^2 = 5$  with the line  $y + 3 = 0$ .

#### EXERCISE 3 [ / 2 ]

Determine the measure of the angle between  $\begin{pmatrix} -2 \\ 5 \end{pmatrix}$  and  $\begin{pmatrix} 4 \\ -1 \end{pmatrix}$ .

#### EXERCISE 4 [ / 5 ]

We consider the line  $d: 3x - 4y + 100 = 0$  and the circle  $c: x^2 + 2x + y^2 - 8y - 139.25 = 0$ .

Determine the equations of the lines that are perpendicular to  $d$  and tangent to  $c$ .

#### EXERCISE 5 [ / 5 ]

$ABC$  is an isosceles triangle with basis  $AB$  and area 125.

Find the possible coordinates of the point  $C$  given  $A = (-13; -11)$  and  $B = (-6; 13)$ .