

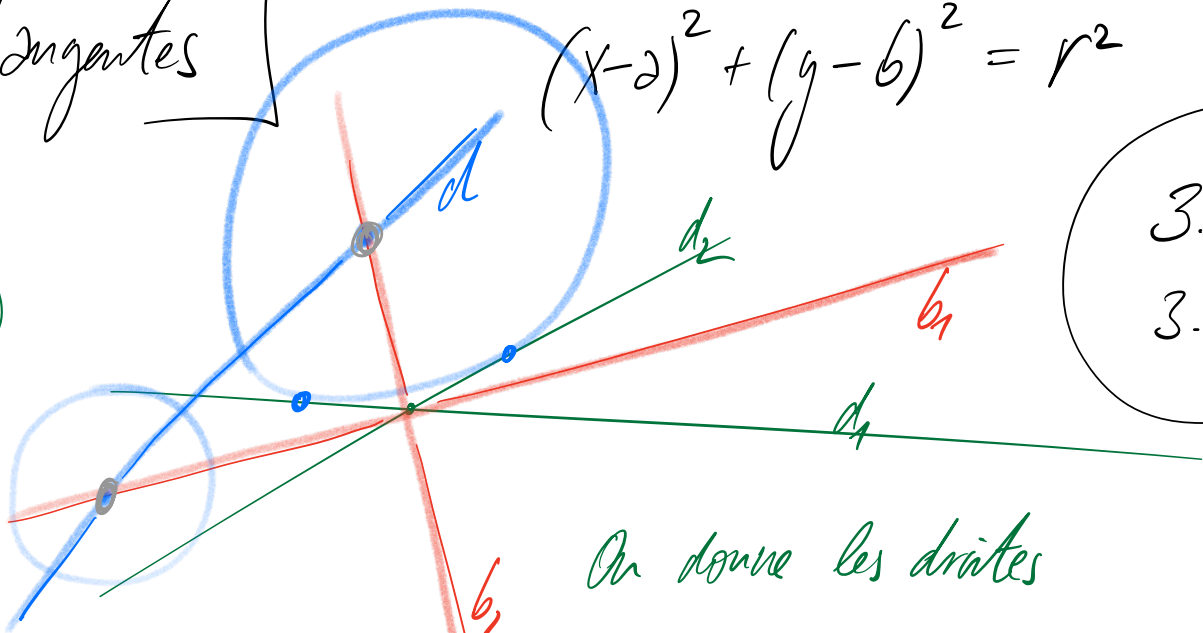
Tangentes

$$(x-a)^2 + (y-b)^2 = r^2$$

3.3.12

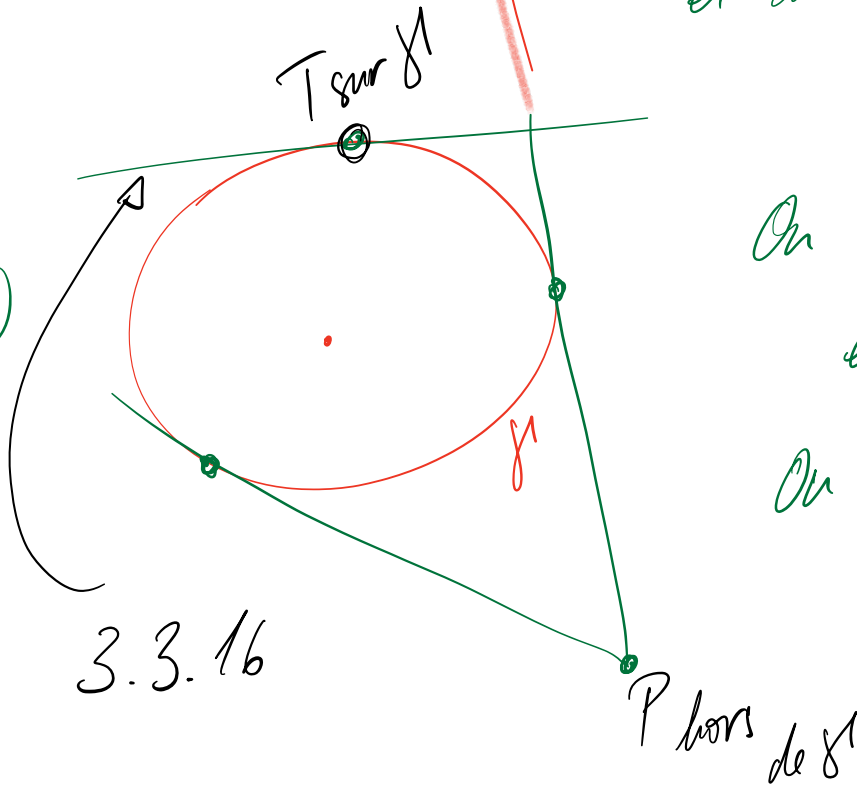
3.3.9

1



On donne les droites
et on cherche les cercles

2



On donne un cercle
et un point.

On cherche la/les
tangente(s)

3.3.12

(1;2) est sur l'une
des deux droites

$$d_1: 7x - y - 5 = 0$$

$$7 \cdot 1 - 2 - 5 = 0 \quad \checkmark \quad (1;2) \text{ est sur } d_1$$

$$d_2: x + y + 13 = 0$$

$$1 + 2 + 13 = 16 \neq 0 \quad \times$$

On cherche les équations des bissectrices:

$$\frac{7x - y - 5}{\sqrt{7^2 + (-1)^2}} = \frac{\pm (x + y + 13)}{\sqrt{1^2 + 1^2}}$$

$$\frac{a_1x + b_1y + c_1}{\sqrt{a_1^2 + b_1^2}} = \frac{\pm (a_2x + b_2y + c_2)}{\sqrt{a_2^2 + b_2^2}}$$

$$\frac{7x - y - 5}{\sqrt{50}} = \frac{\pm (x + y + 13)}{\sqrt{2}}$$

$$7x - y - 5 = \frac{\sqrt{50}}{\sqrt{2}} \cdot (\pm (x + y + 13))$$

$\cdot \sqrt{50}$

$$7x - y - 5 = \pm 5(x + y + 13)$$

$$7x - y - 5 = +5(x + y + 13)$$

$$7x - y - 5 = 5x + 5y + 65$$

$$7x - y - 5 = -5 \cdot (x + y + 13)$$

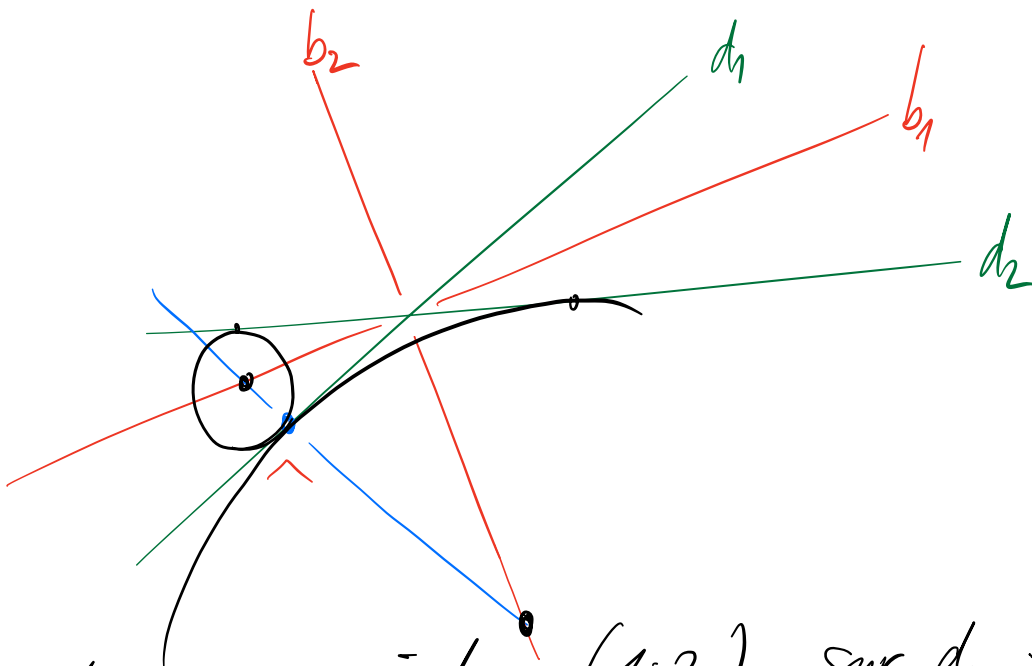
$$7x - y - 5 = -5x - 5y - 65$$

$$12x + 4y + 60 = 0$$

$$\div 2 \quad 2x - 6y - 70 = 0$$

$$b_1: \boxed{x - 3y - 35 = 0}$$

$$\div 4 \quad b_2: \boxed{3x + y + 15 = 0}$$



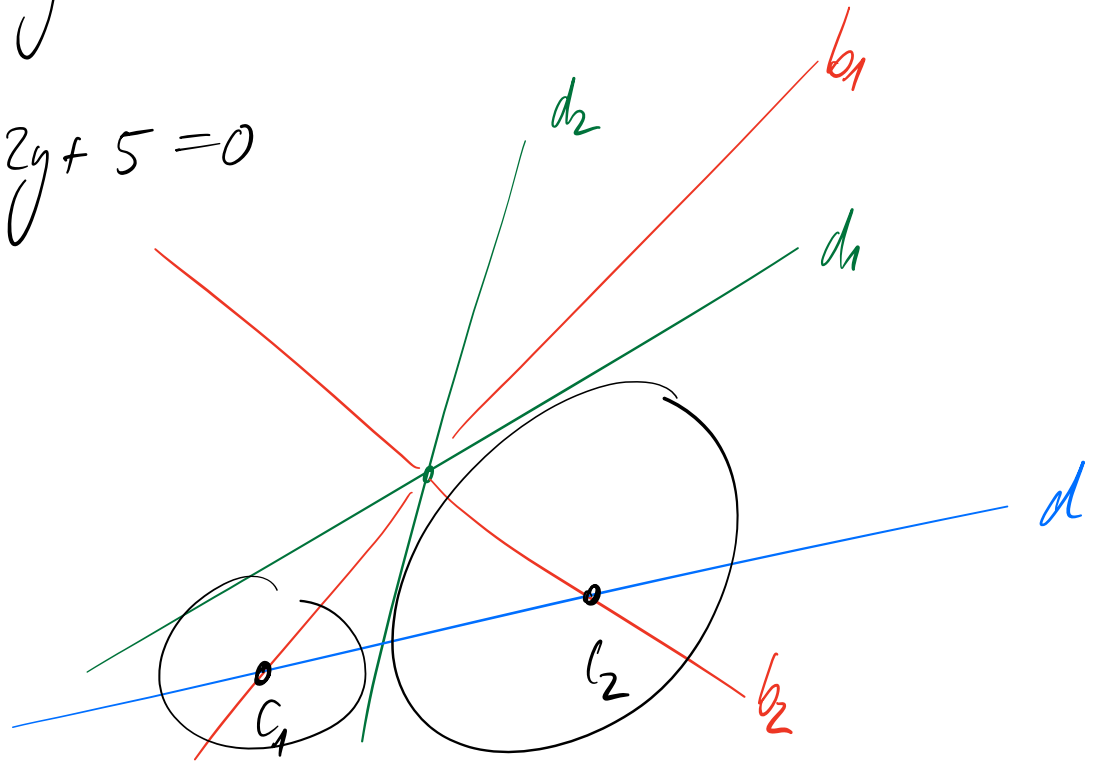
On donne un point : $(1; 2)$ sur d_1 ?
sur d_2 ?

3.3.9

$$d: 4x - 5y - 3 = 0$$

$$d_1: 2x - 3y - 10 = 0$$

$$d_2: 3x - 2y + 5 = 0$$



$$x+1=0$$

$$x=-1$$

$$(1; 2,5)$$

$$y=x+1$$

$$f(x) = x+1 + \frac{1}{x+1}$$

$$f(x) = x+1 + \frac{2}{x+1}$$

$$\lim_{x \rightarrow \infty} f(x) = x+1 \quad \text{A.O.} \checkmark$$

$$x=1$$

$$f(1) = 2,5$$

$$1+1 + \frac{2}{1+1}$$

$$1+1 + \frac{2}{2} = 2,5$$

$$2 + \frac{2}{2} = 2,5$$

$$4 + 2 = 5$$

$$2 = 1$$