

Corrige'

8.4

$$(x-h)^2 + (y-k)^2 = r^2$$

• centre: (h, k)

• rayon: r

5) $(x-h)^2 + (y-k)^2 = r^2$
 $x^2 + y^2 = (2\sqrt{5})^2$

$$x^2 + y^2 = 4 \cdot 5$$

$$x^2 + y^2 = 20$$

7) $(x-h)^2 + (y-k)^2 = r^2$

$$(x-0)^2 + (y-2)^2 = 5^2$$

$$x^2 + (y-2)^2 = 25$$

10) $(x-h)^2 + (y-k)^2 = r^2$

$$(x-5)^2 + (y-2)^2 = 4^2$$

$$(x-5)^2 + (y+2)^2 = 16$$

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

16) $(x-h)^2 + (y-k)^2 = r^2$

$$(-4-0)^2 + (2-0)^2 = r^2$$

$$16 + 4 = r^2$$

$$20 = r^2$$



$$x^2 + y^2 = 20$$

19) abs at 6 \rightarrow (6,0)

$$(x-h)^2 + (y-k)^2 = r^2$$

$$(6-0)^2 + (0-0)^2 = r^2$$

$$36 = r^2$$

\rightarrow

$$x^2 + y^2 = 36$$

20) ord at 5 \rightarrow (0,5)

$$(0-0)^2 + (5-0)^2 = r^2$$

$$25 = r^2$$

\rightarrow

$$x^2 + y^2 = 25$$

21) $(x-h)^2 + (y-k)^2 = r^2$

$$(-2-1)^2 + (-4-0)^2 = r^2$$

$$9 + 16 = r^2$$

$$25 = r^2$$

\rightarrow

$$(x-1)^2 + y^2 = 25$$

P: (-2, -4)

C: (1, 0)

23) $(x-h)^2 + (y-k)^2 = r^2$

$$(3-0)^2 + (0-1)^2 = r^2$$

$$9 + 1 = r^2$$

$$10 = r^2$$

\rightarrow

$$x^2 + (y-1)^2 = 10$$

P: (3, 0)

C: (0, 1)

26) $(18-11)^2 + (15-(-9))^2 = r^2$

$$49 + 576 = r^2$$

$$625 = r^2$$

\rightarrow

$$(x-11)^2 + (y+9)^2 = 625$$

P: (18, 15)

C: (11, -9)

$$28) \quad C : (0, 7)$$

$$r : 3$$

$$31) \quad C : (-1, 2)$$

$$r : 2$$

$$32) \quad C : (0, 0)$$

$$r : 0.1$$

$$35) \quad 2(x-2)^2 + 2(y+1)^2 = 32$$

$$(x-2)^2 + (y+1)^2 = 16$$

$$C : (2, -1)$$

$$r : 4$$

$$36) \quad C : (a, b)$$

$$r : C$$

$$37a) \quad (0+4)^2 + (0-5)^2 \stackrel{?}{=} 25$$

$$16 + 9 \stackrel{?}{=} 25$$

$$25 = 25 \quad \checkmark \rightarrow \text{oui}$$

$$d) \quad (\sqrt{8}-4+4)^2 + (\sqrt{17}+3-3)^2 \stackrel{?}{=} 25$$

$$(\sqrt{8})^2 + (\sqrt{17})^2 \stackrel{?}{=} 25$$

$$8 + 17 \stackrel{?}{=} 25$$

$$25 = 25 \quad \checkmark \rightarrow \text{oui}$$

40a)

C \rightarrow milieu de AB

$$M \rightarrow \left(\frac{2+2}{2}, \frac{5+5}{2} \right)$$

$$M \rightarrow (2, 0)$$

$$(x-h)^2 + (y-k)^2 = r^2$$

$$(x-2)^2 + (y-0)^2 = 5^2$$

$$(x-2)^2 + y^2 = 25$$

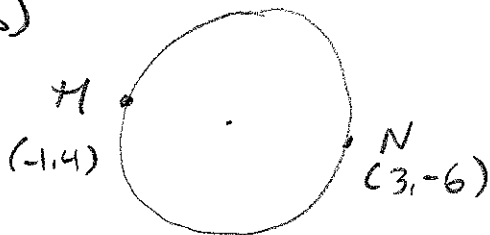
r \rightarrow distance de A \rightarrow C

$$d = \sqrt{(2-2)^2 + (0-5)^2}$$

$$d = \sqrt{0 + 25}$$

$$d = 5$$

b)

C \rightarrow milieu de MN

$$C \left(\frac{-1+3}{2}, \frac{4-6}{2} \right)$$

$$(1, -1)$$

r = distance de M \rightarrow C

$$d = \sqrt{(1-(-1))^2 + (-1-4)^2}$$

$$d = \sqrt{4 + 25}$$

$$d = \sqrt{29}$$

$$(x-h)^2 + (y-k)^2 = r^2$$

$$(x-1)^2 + (y-(-1))^2 = \sqrt{29}^2$$

$$(x-1)^2 + (y+1)^2 = 29$$

41.

$$3x - 2y - z = 0 \quad \times 3$$

$$4x + 3y + 2z = 0 \quad \times 2$$

centre (0,0)

$$x^2 + y^2 = r^2$$

$$(-2)^2 + (-4)^2 = r^2$$

$$4 + 16 = r^2$$

$$r^2 = 20$$

$$9x - 6y - 6 = 0$$

$$8x + 6y + 40 = 0$$

$$17x + 34 = 0$$

$$x = -2$$

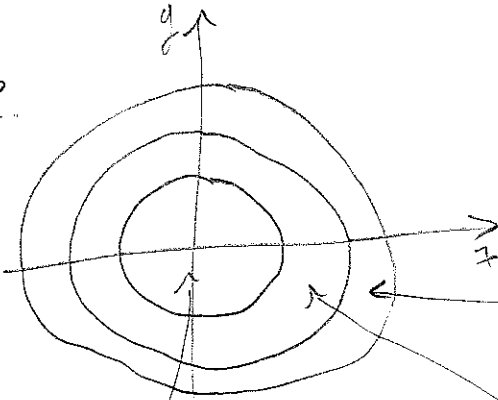
$$4(-2) + 3y + 20 = 0$$

$$3y + 12 = 0$$

$$y = -4$$

$$x^2 + y^2 = 20$$

42.



noyau
diamètre = 2400 km

$$r = 1200 \text{ km}$$

$$x^2 + y^2 = 1200^2$$

$$x^2 + y^2 = 1440000$$

noyau externe

$$r = 1200 + 2300 = 3500$$

$$x^2 + y^2 = 3500^2$$

$$x^2 + y^2 = 12250000$$

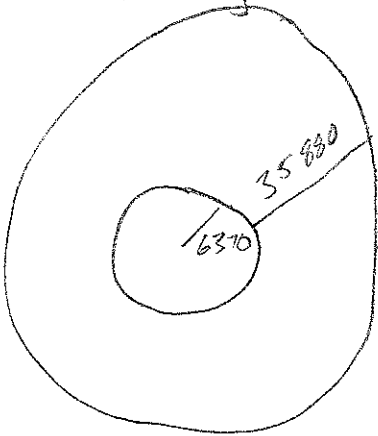
manteau

$$r = 1200 + 2300 + 2900 = 6300$$

$$x^2 + y^2 = 6300^2$$

$$x^2 + y^2 = 40960000$$

44.



$$r = 6370 + 35880$$

$$= 42250$$

$$x^2 + y^2 = 42250^2$$

$$x^2 + y^2 = 1785062500$$

$$46 \quad (x-2)^2 + (y+3)^2 = 30$$

$$\begin{aligned} a) \quad C &= 2\pi r \\ &= 2\pi \sqrt{30} \\ &= 34,4 \end{aligned} \quad r = \sqrt{30}$$

$$\begin{aligned} b) \quad A &= \pi r^2 \\ &= \pi (\sqrt{30})^2 \\ &= 94,2 \end{aligned}$$

$$55 \quad x^2 + y^2 - 10x + 12y - 3 = 0$$

$$(x^2 - 10x + 25) - 25 + (y^2 + 12y + 36) - 36 - 3 = 0$$

$$(x-5)^2 + (y+6)^2 - 64 = 0$$

$$(x-5)^2 + (y+6)^2 = 64$$

Rayon : 8

centre : (5, -6)

$$38. \quad (x-2)^2 + (y-3)^2 = 12, \quad (k, z)$$

$$(k-2)^2 + (z-3)^2 = 12$$

$$(k-2)^2 + 1 = 12$$

$$\sqrt{(k-2)^2} = \sqrt{11}$$

$$k-2 = \pm\sqrt{11}$$

$$k = 2 \pm \sqrt{11}$$