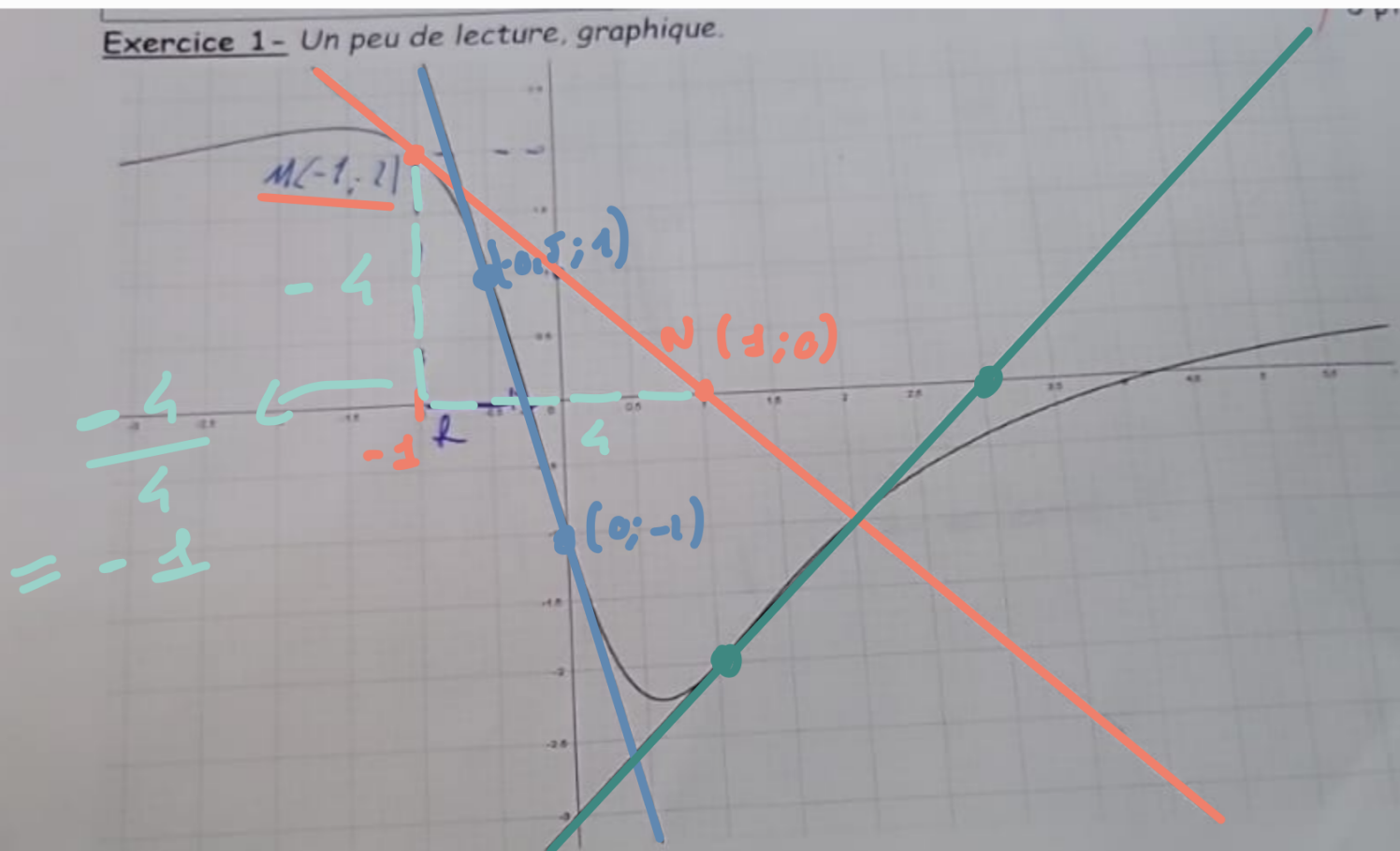


exercice :

1)

Exercice 1 - Un peu de lecture, graphique.



$$\begin{aligned} 1) \quad f'(-1) &= \frac{2 - 0}{-1 - 1} \\ &= \frac{2}{-2} = -1 \end{aligned}$$

$$f'(0) = \frac{1 - (-1)}{-0,5 - 0} = \frac{2}{-0,5} = -4$$

$$f'(1) = \frac{-4}{-4} = 1.$$

2) $T_{-1}: y = -1(x+1) + 2$

$$y = -x - 1 + 2$$

$$y = -x + 1$$

$$T_0: y = -4(x-0) - 1$$

$$y = -4x - 1.$$

$$T_1: y = 1(x-1) - 2$$

$$y = x - 1 - 2$$

$$y = x - 3.$$

exercice :

$$f(x) = -x^3 - 0,5x^2 + 1,2x$$

- 1) Déterminer la dérivée.
 - 2) Étudier le signe de la dérivée.
 - 3) Dresser le tableau de variations de f .
-

$$\begin{aligned} 1) \quad f'(x) &= -3x^2 - 0,5 \times 2x + 1,2 \\ &= -3x^2 - x + 1,2. \end{aligned}$$

$$2) \quad \Delta = (-1)^2 - 4 \times -3 \times 1,2$$

$$\Delta = 1 + 14,4$$

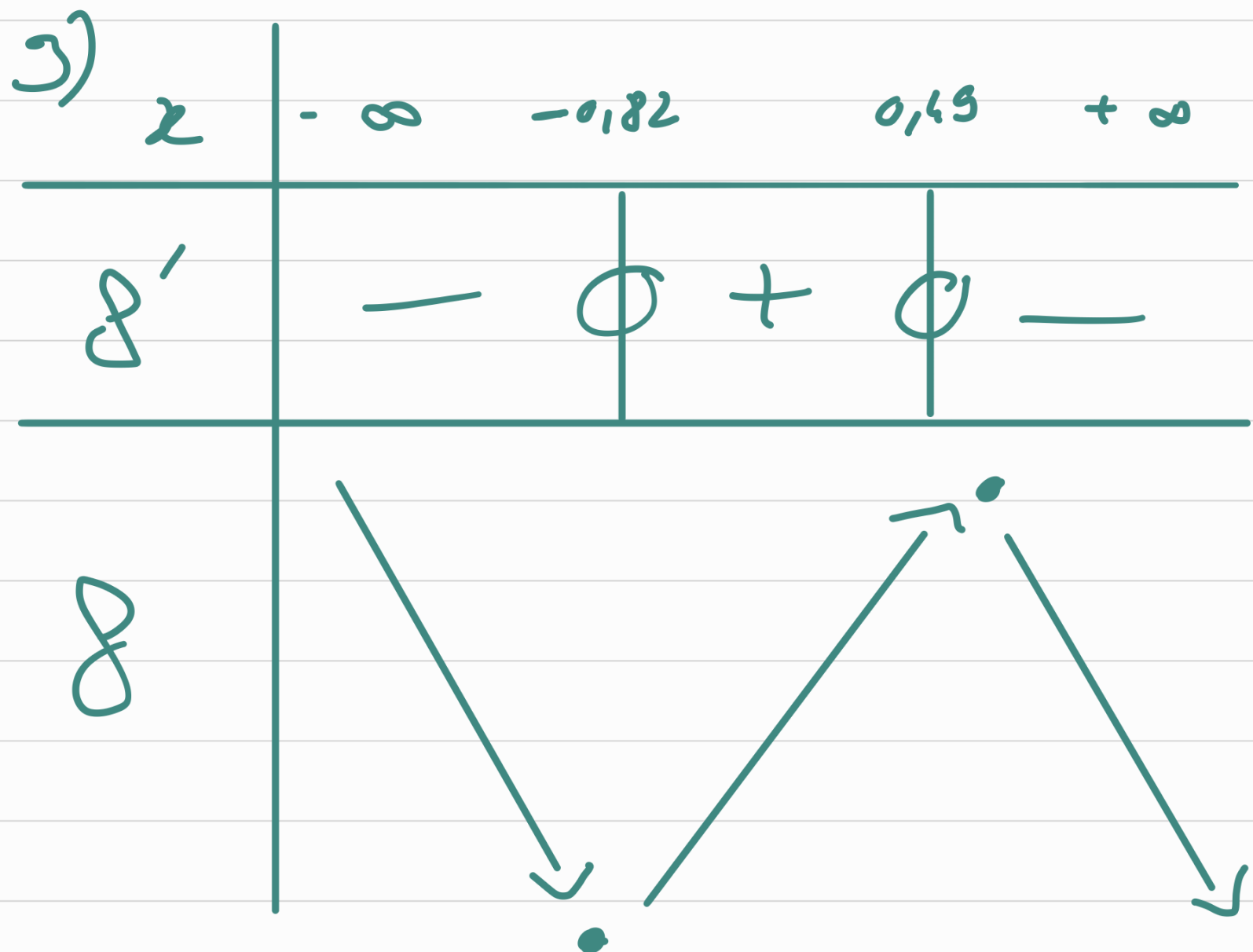
$$= 15,4 > 0$$

$$x_1 = \frac{-b - \sqrt{\Delta}}{2a} = \frac{1 - \sqrt{15,4}}{2x - 3}$$

$$\approx 0,49.$$

$$x_2 = \frac{-b + \sqrt{\Delta}}{2a} \approx -0,82.$$

x	$-\infty$	$-0,82$	$0,49$	$+\infty$
g'	<i>signe a</i> 		<i>signe -a</i> 	<i>signe a</i> 



$$\bullet \quad g(f(x))' = f'(x) \times g'(f(x))$$

$$\bullet \quad \left[\underbrace{(4x+5)}_{u'}^3 \right]' = 4 \times \underbrace{3}_{n} \times \underbrace{(4x+5)^2}_{u^{n-1}}$$

$$(u^n)' = n u^{n-1} \times u'$$

$$(\sqrt{u})' = \frac{u'}{2\sqrt{u}}$$

$$\left(\frac{1}{u} \right)' = -\frac{u'}{u^2}$$

$$\cdot (\sqrt{5x-6})'$$

$$= \overset{u'}{\circledast} 5 \times \frac{1}{2\sqrt{5x-6}}$$

$$= \frac{5}{2\sqrt{5x-6}}.$$