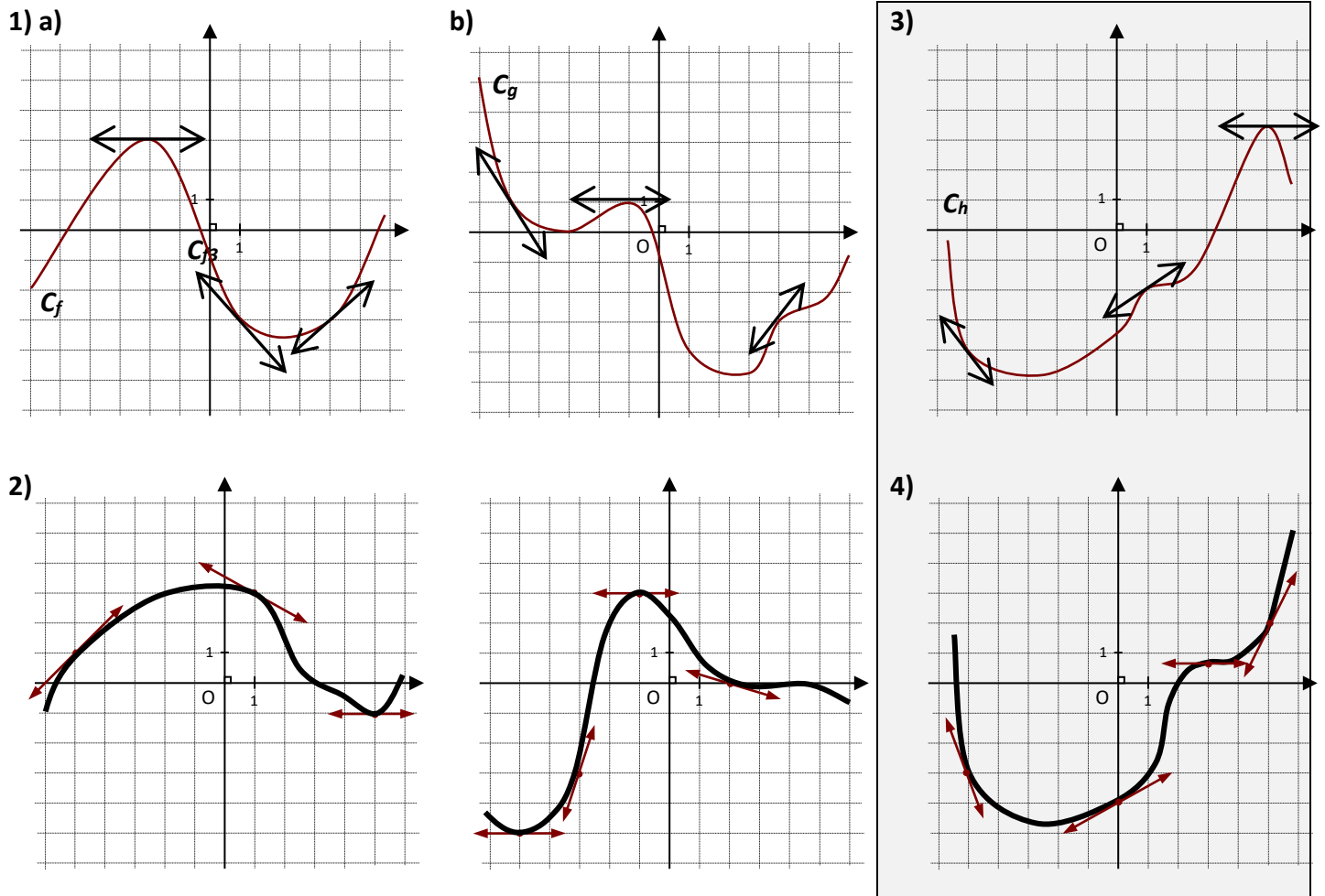


Corrigés Savoir Df. 5

Corrigé Exercice 6



Corrigé Exercice 7

1)

$$f(-4) = -2 \text{ et } f'(-4) = 3$$

$$f'(3) = 4 \text{ et } f'(3) = -\frac{1}{2}$$

$$g(-3) = -4 \text{ et } g'(-3) = 0$$

$$g(4) = 2 \text{ et } g'(4) = 1$$

$$h(-3) = -1 \text{ et } h'(-3) = -\frac{5}{2}$$

$$h(2) = 1 \text{ et } h'(2) = 2$$

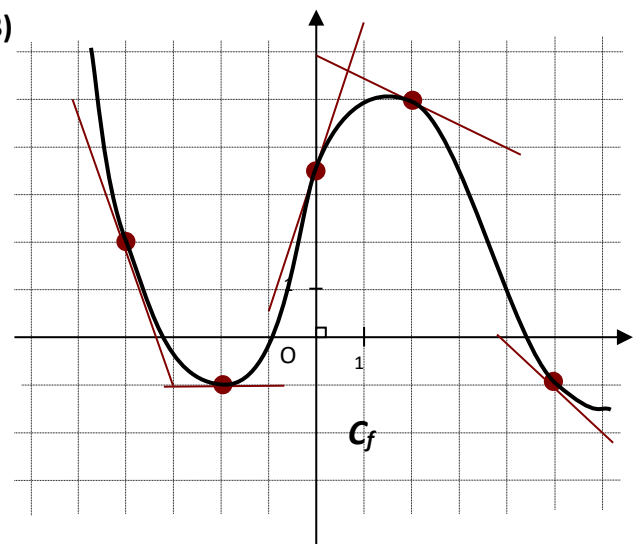
$$h(5) = 3 \text{ et } h'(5) = 0$$

2)

x	-6	1	6
$f(x)$	2	5	1
$f'(x)$	$\frac{3}{2}$	$-\frac{1}{3}$	-4

x	-5	0	6
$g(x)$	2	-2	-2
$g'(x)$	0	-2	$\frac{1}{3}$

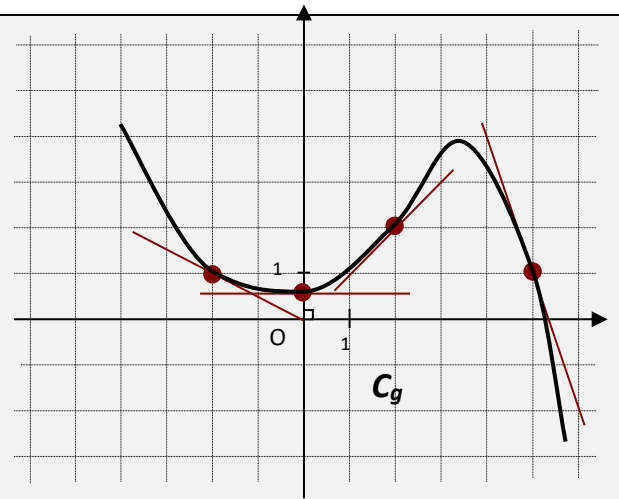
3)



4)

x	-6	-2	0	6
$h(x)$	4	10	-6	2
$h'(x)$	4 (unités !)	0	$-\frac{4}{3}$	$\frac{2}{3}$

5)



Corrigé Exercice 8

$$\begin{aligned} 1) \mathcal{T}_3 : y &= f'(3) \cdot (x - 3) + f(3) \\ &\Leftrightarrow y = 3(x - 3) + 2 \Leftrightarrow y = 3x - 7 \end{aligned}$$

$$\begin{aligned} \mathcal{T}_{-3} : y &= f'(-3)(x + 3) + f(-3) \\ &\Leftrightarrow y = -\frac{1}{4}(x + 3) - 1 \Leftrightarrow y = -\frac{1}{4}x - \frac{7}{4} \end{aligned}$$

$$\begin{aligned} 2) \mathcal{T}_{-2} : y &= f'(-2) \cdot (x + 2) + f(-2) \\ &\Leftrightarrow y = -3(x + 2) + 2 \Leftrightarrow y = -3x - 4 \end{aligned}$$

$$\begin{aligned} \mathcal{T}_{-1} : y &= f'(-1) \cdot (x + 1) + f(-1) \\ &\Leftrightarrow y = 0(x + 1) - 2 \Leftrightarrow y = -2 \end{aligned}$$

Tangente horizontale

$$\begin{aligned} \mathcal{T}_1 : y &= f'(1) \cdot (x - 1) + f(1) \\ &\Leftrightarrow y = 2(x - 1) - 1 \Leftrightarrow y = 2x - 3 \end{aligned}$$

$$\begin{aligned} \mathcal{T}_3 : y &= f'(3) \cdot (x - 3) + f(3) \\ &\Leftrightarrow y = 6(x - 3) + 1 \Leftrightarrow y = 6x - 17 \end{aligned}$$

$$\begin{aligned} 3) \mathcal{T}_2 : y &= f'(2) \cdot (x - 2) + f(2) \\ &\Leftrightarrow y = 0(x - 2) - 1 \\ &\Leftrightarrow y = -1 \end{aligned}$$

Tangente horizontale

$$\begin{aligned} \mathcal{T}_{-1} : y &= f'(-1) \cdot (x + 1) + f(-1) \\ &\Leftrightarrow y = -10(x + 1) + 10 \\ &\Leftrightarrow y = -10x \end{aligned}$$

$$\begin{aligned} 4) \mathcal{T} : y &= h'(3)(x - 3) + g(3) \\ \text{On a } g(3) &= \frac{3 \times 3 + 1}{5 - 3} = \frac{10}{2} = 5 \\ &\Leftrightarrow y = 4(x - 3) + 5 \\ &\Leftrightarrow y = 4x - 7 \end{aligned}$$