

$$\begin{aligned} \text{So } f(x) &= \sqrt{x-1} \rightarrow \text{Dom } f = [1, +\infty) \\ g(x) &= 2x^2 - 5x + 3 \rightarrow \text{Dom } g = \mathbb{R} \end{aligned}$$

$$\begin{aligned} (f \circ g)(x) &= f(g(x)) = \sqrt{g(x)-1} \\ &= \sqrt{2x^2 - 5x + 3 - 1} \\ &= \sqrt{2x^2 - 5x + 2} \end{aligned}$$

Devons résoudre
 $2x^2 - 5x + 2 > 0$

$$2x^2 - 5x + 2 = 0$$

$$x = \frac{5 \pm \sqrt{25 - 16}}{4}$$

$$= \frac{5 \pm 3}{4} \begin{matrix} \nearrow 2 \\ \searrow \frac{1}{2} \end{matrix}$$

$$\begin{array}{c} + \quad 0 \quad - \quad 0 \quad + \\ \hline \text{---} \quad \frac{1}{2} \quad \text{---} \quad 2 \quad \text{---} \end{array} \quad \text{signes de } 2x^2 - 5x + 2$$

$$2x^2 - 5x + 2 > 0 \Rightarrow$$

$$\Rightarrow x \leq \frac{1}{2} \text{ ou } x \geq 2$$

Enfin

$$(f \circ g)(x) = \sqrt{2x^2 - 5x + 2}$$

$$\text{Dom } f \circ g = \left(-\infty, -\frac{1}{2}\right] \cup [2, +\infty)$$

(Dom $f \circ g \subset \text{Dom } g$)