

## Ex 2.5.14

$$e) \lim_{x \rightarrow 1} (2x^2 - 5x + 3) \cdot \frac{1}{x-1} = 0 \cdot \frac{1}{0} = \underline{\underline{0 \cdot \infty}}$$

↑  
forme  
indéterminée

$$= \lim_{x \rightarrow 1} \frac{2x^2 - 5x + 3}{x-1} = \frac{0}{0}$$

$$= \lim_{x \rightarrow 1} \frac{\cancel{(x-1)}(2x-3)}{\cancel{x-1}} = \lim_{x \rightarrow 1} (2x-3) = -1$$

$$f) \lim_{x \rightarrow 1} \left( \frac{x^2}{x-1} - \frac{1}{x-1} \right) = \frac{1}{0} - \frac{1}{0} = \underbrace{\infty - \infty}_{\text{forme indéterminée}}$$

$$= \lim_{x \rightarrow 1} \frac{x^2 - 1}{x - 1} = \frac{0}{0} = \lim_{x \rightarrow 1} \frac{(x+1)(x-1)}{x-1}$$

$$= \lim_{x \rightarrow 1} (x+1) = 2$$

forme indéterminée :  $\frac{0}{0}$   $0 \cdot \infty$   $\infty - \infty$