5. $f'(x) = 1 - \frac{1}{x^2} = \frac{x^2-1}{x^2}$

Signe de x^2-1 :

Signe de x^2 : positif.

x	0		1		$+\infty$
f'	‖	−	0	+	
f	‖	$+\infty$ ↘	$f(1)$	↗ $+\infty$	

$$\lim_{\substack{x \to 0 \\ x>0}} f(x) = 0 + \infty = +\infty$$

$$f(1) = 1 + 1 = 2$$

$$\lim_{x \to +\infty} f(x) = +\infty + 0 = +\infty$$