Ex 7 : $\lim\limits_{\substack{x \to 1 \\ x > 1}} \dfrac{x^2 - 2x + 1}{x^2 - 1} = \dfrac{1 - 2 + 1}{1 - 1} = \dfrac{0}{0} = \text{?}$

$$x^2 - 2x + 1 = (x - 1)^2 \quad \text{et} \quad x^2 - 1 = (x + 1)(x - 1)$$

$$\lim\limits_{\substack{x \to 1 \\ x > 1}} \dfrac{(x - 1)^2}{(x + 1)(x - 1)} = \lim\limits_{\substack{x \to 1 \\ x > 1}} \dfrac{x - 1}{x + 1} = \dfrac{0}{2} = 0$$

Ex 8 : $\lim\limits_{\substack{x \to 2 \\ x < 2}} \dfrac{x^2 - 3x + 2}{x^2 - x - 2} = \dfrac{4 - 6 + 2}{4 - 2 - 2} = \dfrac{0}{0} = \text{?}$

$$x^2 - 3x + 2 = (x - 2)(x + b) =$$
$$= x^2 + bx - 2x - 2b =$$
$$= x^2 + x(b - 2) - 2b$$

Donc $\quad b - 2 = -3 \qquad -2b = 2$
$$b = -1 \qquad\qquad b = -1$$

$$x^2 - 3x + 2 = (x - 2)(x - 1)$$