Calcule los siguientes limites

$$\lim_{x \to 5} \frac{x^2-6x+5}{x-5} \qquad \frac{(x-1)(x-5)}{x-5}$$

$$\lim_{x \to 5} 5-1 = 4 \qquad x-1$$

$$\lim_{x \to 4} \frac{x^2-4x}{x^2-3x-4} \qquad \frac{(x+2)(x+2)}{(x+4)(x-1)}$$

$$\lim_{x \to 4} \frac{4}{4+1} = \frac{4}{5} \qquad \frac{x}{x+1}$$

$$\lim_{x \to 5} \frac{x^2-5x+6}{x-5} \qquad \frac{(x+3)(x-2)}{x-5}$$

Es divergente

$$\lim_{x \to 5} \frac{x^2-5x+6}{x-5} = \infty$$

$$= -\infty$$

$$\lim_{x \to -1} \frac{x^2-4x}{x^2-3x-4} \qquad \frac{x(x-4)}{(x+1)(x-4)}$$

Es divergente

$$\frac{x}{x+1}$$

$$\lim_{x \to -1} \frac{x^2-4x}{x^2-3x-4} = \infty$$

$$= -\infty$$

$$\lim_{t \to -3} \frac{t^2-9}{2t^2+7t+3} \qquad \frac{(t+3)(t-3)}{(2t+1)(t+3)}$$

$$\lim_{t \to -3} \frac{-3-3}{2(-3)+1} = \frac{6}{5} \qquad \frac{t-3}{2t+1}$$

$$\lim_{x \to -1} \frac{2x^2+3x+1}{x^2-2x-3} \qquad \frac{(2x+1)(x+1)}{(x+1)(x-3)}$$

$$\lim_{x \to -1} \frac{2(-1)+1}{-1-3} = \frac{1}{4} \qquad \frac{2x+1}{x-3}$$

$$\lim_{h \to 0} \frac{(-5+h)^2-25}{h} \qquad \frac{h(h-10)}{h}$$

$$h-10$$

$$\lim_{h \to 0} 0-10 = -10$$

$$\lim_{h \to 0} \frac{(2+h)^3-8}{h} \qquad \frac{h((2+h)^2+2(2+h)+4)}{4}$$

$$h^2+6h+12$$

$$\lim_{h \to 0} 0^2+6(0)+12 = 12$$

$$\lim_{x \to -2} \frac{x+2}{x^3+8} \qquad \frac{x+2}{(x+2)(x^2-2x+4)}$$

$$\frac{1}{x^2-2x+4}$$

$$\lim_{x \to -2} \frac{1}{-2^2-2(-2)+4} = \frac{1}{12}$$

$$\lim_{t \to 1} \frac{t^4-1}{t^3-1} \qquad \frac{(t^2+1)(t+1)(t-1)}{t^3-1}$$

$$\frac{(t^2+1)(t+1)}{t^2+t+1}$$

$$\lim_{t \to 1} \frac{(1^2+1)(1+1)}{1^2+1+1} = \frac{4}{3}$$

$$\lim_{h \to 0} \frac{\sqrt{9+h}-3}{h} \qquad \frac{1}{\sqrt{h+9}+3}$$

$$\lim_{h \to 0} \frac{1}{\sqrt{0+9}+3} = \frac{1}{6}$$

$$\lim_{u \to 2} \frac{\sqrt{4u+1}-3}{u-2} \qquad \frac{4}{\sqrt{4u+1}+3}$$

$$\lim_{u \to 2} \frac{4}{\sqrt{4(2)+1}+3} = \frac{2}{3}$$