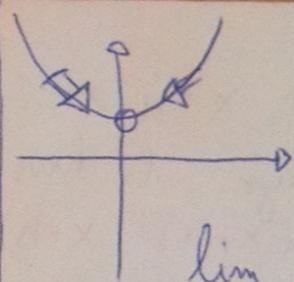


$$f(x) = x^2$$

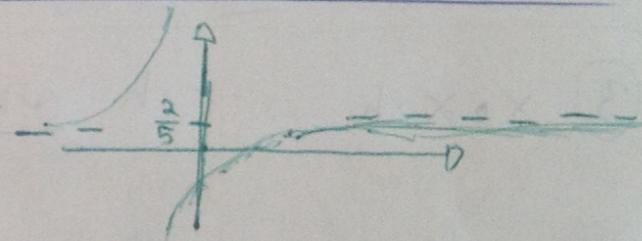
$$\lim_{x \rightarrow 4} x^2 = 16$$



$$f(x) = \frac{x^3}{x} + 5, x=0 \text{ is undefined}$$

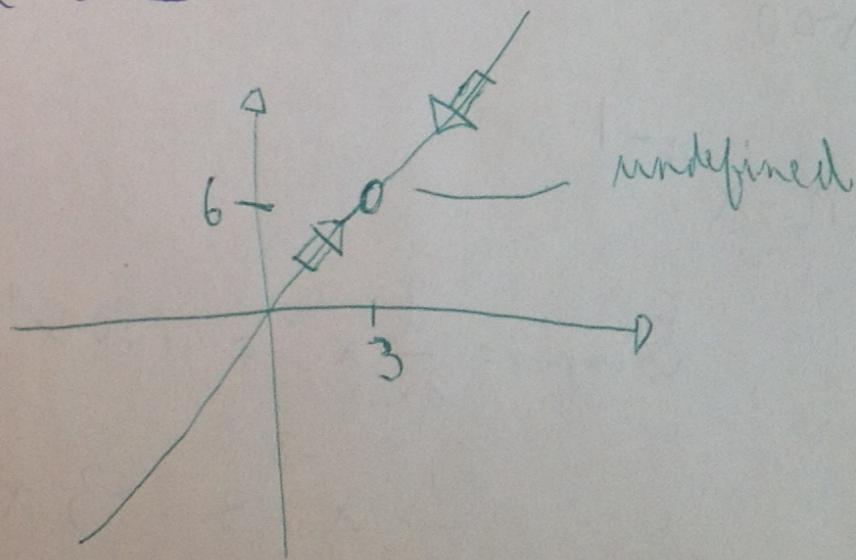
$$\lim_{x \rightarrow 0} \frac{x^3}{x} + 5 = 5$$

$$\lim_{x \rightarrow \infty} \frac{2x-3}{5x+4} = \lim_{x \rightarrow \infty} \frac{x(2-\frac{3}{x})}{x(5+\frac{4}{x})} = \frac{2}{5}$$



$$\lim_{x \rightarrow 3} \frac{x^2-9}{x-3} = \lim_{x \rightarrow 3} \frac{3^2-9}{3-3} = \frac{0}{0} \text{ but ...}$$

$$= \lim_{x \rightarrow 3} \frac{(x+3)(\cancel{x-3})}{(\cancel{x-3})} = \lim_{x \rightarrow 3} x+3 = 6$$



Limits

Preview from Notesale.co.uk  
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