

Ejercicio Desarrollo Actividad Repositorio Colaborativo

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Nombres y Apellidos

Curso

Fecha

1. In Exercises 13–22, find the limit of each rational function (a) as $x \rightarrow \infty$ (b) as $x \rightarrow \infty$. (Hass et al., 2018, p. 94)

(E17.)

$$y = \frac{7x^3}{x^3 - 3x^2 + 6x}$$

Solution:

$$\begin{aligned} h(x) &= \frac{7x^3}{x^3 - 3x^2 + 6x} & h(x) &= \frac{7x^3}{x^3 - 3x^2 + 6x} \\ \lim_{x \rightarrow \infty} &= \frac{x^3(7)}{x^3(1 - \frac{3}{x} + \frac{6}{x^2})} & \lim_{x \rightarrow \infty} &= \frac{x^3(7)}{x^3(1 - \frac{3}{x} + \frac{6}{x^2})} \\ \lim_{x \rightarrow \infty} &= \frac{7}{1 - \frac{3}{\infty} + \frac{6}{\infty^2}} & \lim_{x \rightarrow \infty} &= \frac{7}{1 - \frac{3}{-\infty} + \frac{6}{-\infty^2}} \\ \lim_{x \rightarrow \infty} &= \frac{7}{\infty} & \lim_{x \rightarrow \infty} &= \frac{7}{-\infty} \\ &= \infty & &= -\infty \end{aligned}$$

Referencias:

Hass, J., Heil, C., Weir, M.D. (Eds.), 2018. Thomas' calculus, Fourteenth edition. ed. Pearson, Boston.

Link:

<https://docs.google.com/document/d/1TmIF9c92XiTiJou9I9b9BlaKBkKSBUlILMZpsZi4qhk/edit>