Basic Calculus | 4th Quarter

Activity 0: Limits at Infinity

March 29 2021

Evaluate the following.

1. $\lim_{x\to\infty} x^3-4x^2+5$
   $=\infty$

2. $\lim_{x\to\infty} \frac{x^3}{4x^2+3}$
   $=\infty$

3. $\lim_{x\to-\infty} \frac{-5}{x^3}-7+\frac{8}{x}$
   $=-7$

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

5. $\lim_{x\to\infty} \frac{5x+\sin x}{x}$
   $=5$

6. $\lim_{x\to\infty} \frac{\sqrt{3x^2+6}}{5-2x}$
   $=\frac{\sqrt{3}}{2}$

7. $\lim_{t\to-\infty} \frac{e^{6t}-4e^{-6t}}{2e^{3t}-5e^{-9t}+e^{-3t}}$
   $=0$