

Math 170: Worksheet 5

Sayan Mukherjee's discussion

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Problem 1. Compute the following limits with proof:

1. $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x^3 + 1}$

2. $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x^5 - 1}$

3. $\lim_{x \rightarrow 2} \frac{x^3 - 8}{x^3 - x^2 - x - 2}$

4. $\lim_{x \rightarrow 2} \frac{\sqrt{x+2} - 2}{\sqrt{x+1} - \sqrt{3}}$

5. $\lim_{x \rightarrow 3} \frac{\sqrt{x^2 - 5} - 2}{\sqrt{x+1} - 2}$