

Student ID		

Last Name: _____

First Name: _____

Show all your work.
If necessary, use extra sheets.

When appropriate,
BOX your final answer.

MA1
Homework

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1. $\lim_{x \rightarrow \infty} \frac{2x^2 - x}{3x^2 + 1} =$	12. $\lim_{x \rightarrow \infty} \frac{x - 3}{x^2 - 5x + 4} =$
2. $\lim_{x \rightarrow \infty} \frac{x + 1}{x^2 + 3} =$	13. $\lim_{x \rightarrow \infty} \frac{-2x^3 - 2x + 3}{3x^3 + 3x^2 - 5x} =$
3. $\lim_{x \rightarrow \infty} \frac{x^3 - 4x + 1}{3x^3 + 2x + 7} =$	14. $\lim_{x \rightarrow \infty} \frac{-2x^3 - 2x + 3}{3x^3 + 3x^2 - 5x} =$
4. $\lim_{t \rightarrow \infty} \frac{t^2 - 2t + 3}{2t^2 + 5t - 3} =$	15. $\lim_{x \rightarrow \infty} \frac{x^3 + 2x - 4}{x^2 + 8x} =$
5. $\lim_{x \rightarrow \infty} \frac{x}{x - 1} =$	16. $\lim_{x \rightarrow \infty} \frac{x + 3}{x^3 - 5} =$
6. $\lim_{x \rightarrow -\infty} x =$	17. $\lim_{x \rightarrow -\infty} \frac{x + 3}{x^3 - 5} =$
7. $\lim_{a \rightarrow \infty} \frac{ a }{ a + 1} =$	18. $\lim_{x \rightarrow \infty} \frac{x^3 - 4x + 3}{3x^3 + 2x - 11} =$
8. $\lim_{x \rightarrow \infty} \frac{3x^3 + 5x^2 - 7}{10x^3 - 11x + 5} =$	19. $\lim_{x \rightarrow \infty} \frac{3 - 2x^4}{x + 5} =$
9. $\lim_{x \rightarrow \infty} \left(\frac{x}{x + 1} \right) \left(\frac{x^2}{5 + x^2} \right) =$	20. $\lim_{x \rightarrow -\infty} \frac{3 - 2x^4}{x + 5} =$
10. $\lim_{n \rightarrow \infty} \frac{8n^2 + 7n}{4n^2} =$	21. $\lim_{x \rightarrow \infty} \frac{8x^3 + 5x - 2}{3x^2 + x + 1} =$
11. $\lim_{y \rightarrow \infty} \frac{y^4}{y^4 - 7y^3 + 7y^2 + 9} =$	22. $\lim_{x \rightarrow -\infty} \frac{8x^3 + 5x - 2}{3x^2 + x + 1} =$