MATA34 - Practice Problem Set T1

- This problem set pertains to **Test 1 Material**.
- These problems are **not** to be handed in.
- These questions reinforce the skills needed for Test 1 but are **not necessarily** representative of the actual test.
- Questions on Test 1 may differ in both content and difficulty.

Problem T1.1

Compute the following limits (or show that they do not exist). Show all your work.

(a) $\lim\limits_{x\to 1} \dfrac{x^2-1}{x-1}$

(b) $\lim\limits_{x\to 1} \dfrac{1}{x^2-1}$

(c) $\lim\limits_{x\to -\infty} \dfrac{2-x^2}{1+3x^2}$

(d) $\lim\limits_{x\to -\infty} \dfrac{4x^3+2x}{x^3-5x}$

(e) $\lim\limits_{x\to 3} \left(\dfrac{1}{3x-9}\right)^8$

Problem T1.2