LIMITS WITH INFINITY

TEXT: 1.7

LAST NAME	FIRST NAME	DATE

1 (5 points). Use the N, δ definition to show that $\lim_{x \to 0^-} \frac{10}{x} = -\infty$

2 (4 points)**.** Use the sandwich theorem and the ϵ, M definition to show that $\lim_{x\to\infty} \dfrac{\text{floor}(x)}{x} = 1$, where floor$(x)$ is the largest integer $\leq x$.

3 (2 points). Use limit laws to find $\lim_{x\to\infty} \frac{4x^3+100x^2}{x^3-x-1}$

4 (2 points). Use limit laws to find $\lim_{x\to-\infty} \frac{3x^4+2x^3+x^2}{x^3-1}$

5 (2 points). Use limit laws to find $\lim_{x\to-\infty} \frac{6-x}{\sqrt{9x^2-x}}$

6 (2 points). Use limit laws to find $\lim_{x\to\infty} 2x^3 - \sqrt{4x^6 - 1}$

7 (2 points). Use limit laws to find $\lim_{x\to\infty} \sqrt{2x^2 + 3} - 2x$