

**Homework Set 3**

DUE: FEB 20, 2019 (AT THE BEGINNING OF CLASS)

**To be handed in***Please write your solutions to Problem 1 on a single sheet of paper!*

1. Compute the following limits if they exist, or justify in case they do not exist:

a)  $\lim_{x \rightarrow 4^-} \frac{9x^2}{x-4}$

b)  $\lim_{x \rightarrow 1} \frac{x^2 + 2x + 3}{x-1}$

c)  $\lim_{x \rightarrow +\infty} \frac{x^2 + 2x - 8}{4x - 3}$

d)  $\lim_{x \rightarrow +\infty} \frac{7x^3 + 3x^2 - 9x + 1}{14x^3 - 5x^2 - 7}$

3. Textbook (5th edition) Section 2.4, Exercises 1-6, 40-48, 70-72

4. Textbook (5th edition) Section 2.5, Exercises 1-4, 13-16

5. Textbook (5th edition) Section 4.5, Exercises 1-6, 19-28, 95-96