Mid exam: **Analysis 1** (2015-2016) Class: **AP1,2 K59** Time: **60’**

**Subject I**

**Exercise 1.** Find the limits **a)** .

**b)** .

**Exercise 2. a)** Find the derivative of the function at .

**b)** Find the 10th-degree Taylor polynomial at of this function.

**Exercise 3.** Find the asymptotes of .

**Exercise 4.** A piece of wire of length L cm is cut into two pieces. One piece is bent into a square and the other is bent into an equilateral triangle. How should the wire be cut so that the total area enclosed is (a) a maximum? (b) a minimum? Determine these areas.

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