

**2020 SPRING CALCULUS 0412: QUIZ 1 (MARCH 16, 2020)**

NAME:

STUDENTS ID:

1. (5 points) Let  $\{a_n\}_{n=1}^{\infty}$  be a sequence, and has the limit  $L$ , that is,  $\lim_{n \rightarrow \infty} a_n = L$ . Describe the definition of the limit in a rigorous way

2. (5 points) Find the exact length of the polar curve  $r = 2 \cos \theta$ ,  $0 \leq \theta \leq \pi$ .