Quiz 2 (8 a.m.)
MAC3309 Mathematical Analysis

Topic   Limit of Sequences   **Score**   10 marks
Time   30 minutes (5*th* Week)   **Semester** 2/2023
Teacher   Assistant Professor Thanatyod Jampawai, Ph.D.
Division of Mathematics, Faculty of Education,   Suan Sunandha Rajabhat University

Name .... **ID** .... **Sec** ....

1. **(5 marks)** Use the Definition to prove that

$$\lim_{n \to \infty} \frac{2n}{n+1} = 2.$$

2. **(5 marks)** Use the Definition to prove that

$$\lim_{n \to \infty} \frac{2n^2}{n+1} = +\infty.$$

Quiz 2 (1 p.m.)
MAC3309 Mathematical Analysis

Topic	Limit of Sequences	**Score**	10 marks
Time	30 minutes ($5th$ Week)	**Semester** 2/2023	
Teacher	Assistant Professor Thanatyod Jampawai, Ph.D.		
	Division of Mathematics, Faculty of Education,	Suan Sunandha Rajabhat University	

Name .... **ID** .... **Sec** ....

1. **(5 marks)** Use the Definition to prove that

$$\lim_{n\to\infty} \frac{2n}{n^2+1} = 0.$$

2. **(5 marks)** Use the Definition to prove that

$$\lim_{n\to\infty} \frac{1-n^2}{n} = -\infty.$$