Math SSRU

Quiz 1 : (8 a.m.)
MAC3309 Mathematical Analysis

Topic	Ordered field axiom, Supremum & Infimum	**Score**	10 marks
Time	30 minutes (3*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** .....

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1. **(5 marks)** Let $x \in \mathbb{R}$ such that $0 < x < 1$. Prove that

$$x < \sqrt{x}.$$

2. **(5 marks)** Let $A = \left\{ \frac{2}{n+1} : n \in \mathbb{N} \right\}$. Find $\mathbf{inf}\, \boldsymbol{A}$ and prove it.

Math SSRU

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

Topic	Ordered field axiom, Supremum & Infimum	**Score**	10 marks
Time	30 minutes (3*th* Week)	**Semester**	2/2023
Teacher	Assistant Professor Thanatyod Jampawai, Ph.D.		
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1. **(5 marks)** Let $x, y \in \mathbb{R}^+$. Prove that
$$\sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} \geq 2.$$

2. **(5 marks)** Let $A = \left\{ \frac{2n}{n+1} : n \in \mathbb{N} \right\}$. Find **sup** $\boldsymbol{A}$ and prove it.