



BRAC University

Department of Mathematics and Natural Sciences

LECTURE ON

Real Analysis (MAT221)

Monotone Sequences and Subsequences

Monotone Convergence, Bolzano-Weierstrass Theorem

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CONDUCTED BY

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Monotone Sequences

Monotonically Increasing Sequence

A sequence $\{a_n\}$ is said to be **monotonically increasing** if for all natural numbers n , the terms of the sequence satisfy the inequality

$$a_n \leq a_{n+1}.$$

Thank You!

We'd love your questions and feedback.

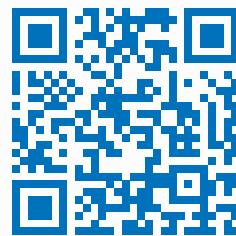
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(Lectures, walkthroughs, and course updates)



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References

- [1] Stephen Abbott, *Understanding Analysis*, 2nd Edition, Springer, 2015.
- [2] Terence Tao, *Analysis I*, 3rd Edition, Texts and Readings in Mathematics, Hindustan Book Agency, 2016.