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| **Proof based question** |
| Question Code: | Sample 6 | Solution ID: | Sample solution |
| Answer: | * In previous question ‘55’

It has been shown that for sequence there exist a number , and for a small integer  such that , for all   * From we can also write

  * Hence, from  it has showed that**.**
* As equation holds, then by the definition of convergence of sequence, it is said that

be a convergent sequence with being it’s limit.* Which means, as gets up to infinity we get a number

that concludes: |
| Step-by-step 1 |
| Description: | * In previous question ‘55’

It has been shown that for sequence there exist a number , and for a small integer  such that  |
| Calculation: | , for all    |
| Step-by-step 2 |
| Description: | Now in if then it also must satisfy  |
| Calculation: |    |
| Step-by-step 3 |
| Conclusion: | * Hence, from  it has showed that**.**
* As equation holds, then by the definition of convergence of sequence, it is said that

be a convergent sequence with being it’s limit.* Which means, as gets up to infinity we get a number

**That concludes**:  |