

## Exam: Limits

### Question 1

#### Limits of Sequences

2023 | Dr. Smith

#### Given:

Let  $x_n = \frac{3n+1}{n-2}$ .

#### To Prove:

Prove that  $\lim(x_n) = 3$ .

*Hint: Use the definition of convergence.*

#### Official Solution:

##### Scratch Work (Proof)

Find  $N$  such that  $|x_n - 3| < \varepsilon$ .

End of Examination