

Name \_\_\_\_\_

## The Mystery of Limits: Unlocking the Secrets of Calculus

### Open-Ended Response Answer Key

1. Limits in calculus are likened to the horizon, always within reach yet forever distant, challenging us to push beyond what's visible and delve into the mysteries of the mathematical universe.
2. Limits allow us to analyze the pattern of values as the input approaches a specific value, helping us understand how functions behave at certain points.
3. Limits have applications in calculating instantaneous rates of change in physics and analyzing trends in economics, among other fields.
4. If the behavior of the function becomes unbounded as the input approaches a specific value, the limit of the function at that point may not exist.

