

Name \_\_\_\_\_

## The Universe's Cosmic Contours: What is its Shape?

### Open-Ended Response Questions

1. Imagine you are an astronomer tasked with conducting a cosmic survey to determine the universe's shape. What methods and observations would you use, and what specific data or patterns would you look for?
2. Reflect on the possible fates of the universe based on its shape – a flat universe leading to eternal expansion, a closed universe resulting in a "Big Crunch," and an open universe culminating in a "Big Freeze." Which outcome do you find the most intriguing, and why?
3. Consider the impact of discovering the true shape of the universe on our understanding of the cosmos. How might confirming a specific shape change our perspective on the universe and its future?
4. If you had the opportunity to explore the universe's shape further as a scientist, what research questions or experiments would you pursue, and what new discoveries might you hope to make?

