

Name \_\_\_\_\_

## Exploring the Secrets of the Universe: How Astronomers Detect and Study Black Holes

### Multiple Choice Questions

1. How are black holes formed?
  - A) Through the birth of small stars
  - B) Through the collapse of massive stars
  - C) Through the explosion of planets
  - D) Through the collision of asteroids
  
2. What is a binary star system?
  - A) A system with two black holes
  - B) A system with two planets orbiting each other
  - C) A system with two stars orbiting around a common center of mass
  - D) A system with two galaxies in close proximity
  
3. How do black holes emit X-rays?
  - A) Through nuclear fusion
  - B) Through the interaction of light and matter
  - C) Through the formation of accretion disks
  - D) Through their strong magnetic fields
  
4. What is the main purpose of the Laser Interferometer Gravitational-Wave Observatory (LIGO) and Virgo Collaboration?
  - A) To study planets in our solar system
  - B) To detect and study gravitational waves
  - C) To observe distant galaxies
  - D) To analyze asteroid impacts on Earth
  
5. How was the first-ever image of a black hole captured in 2019?
  - A) Using visible light telescopes
  - B) Through the collaboration of amateur astronomers
  - C) By creating a virtual telescope with radio telescopes
  - D) By sending a spacecraft close to the black hole

