



The Einstein Ring

Multiple Choice

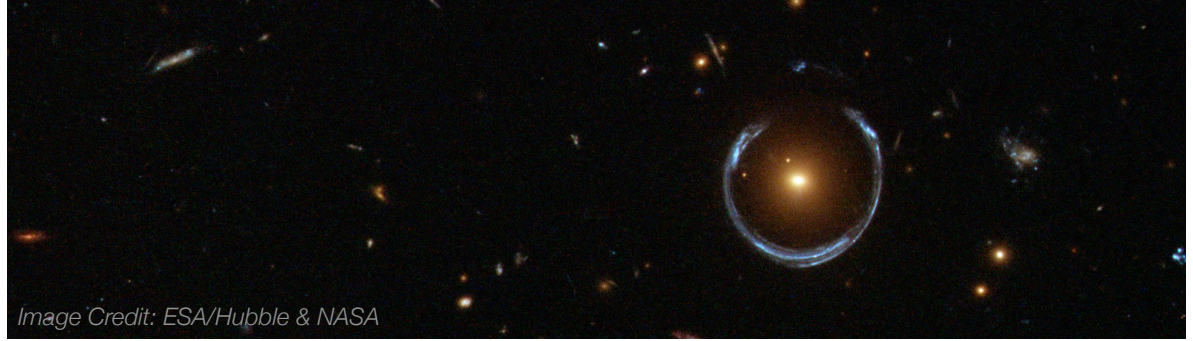
For each question, select the best answer from the four alternatives.

1. The first sentence of paragraph 1 expresses
 - a) a supporting detail
 - b) a main idea
 - c) a conclusion
 - d) a purpose
2. Which word would best replace the word “distort” in the second sentence of paragraph 1?
 - a) tear
 - b) crush
 - c) collapse
 - d) warp
3. Which alignment could form an image of a quasar visible from Earth using the process of gravitational lensing?
 - a) Earth, quasar, and massive galaxy all in a straight line
 - b) massive galaxy, Earth, and quasar all in a straight line
 - c) quasar, massive galaxy, and earth spaced equally apart on a circle
 - d) quasar, massive galaxy, and Earth all in a straight line
4. Which of the following is the best alternative title for this article?
 - a) “Einstein’s Predictions”
 - b) “Gravitational Lenses”
 - c) “Quasars in a New Light”
 - d) “Hubble Shows an Amazing Universe”

Short Answer

What evidence supports the existence of gravitational lensing? Use specific detail in your answer.

5. _____
- _____
- _____
- _____



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Short Answer

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- Scientists have photographed a massive galaxy cluster that has bent the light from more distant galaxies into smeared-out arcs. Scientists have also observed several Einstein rings, in which a perfect alignment of a symmetrical gravitational lens and a distant galaxy causes light from the galaxy to bend into a complete circle.