

Name _____

ALBERT EINSTEIN RESEARCH

Use internet or published material to research the following questions on Albert Einstein. List at least 3 references/websites consulted: _____

Born: Date _____ Location _____
Died: Date _____ Location _____

Year renounced German citizenship _____
Year first visited U.S. _____
Year moved permanently to U.S. _____
Year became U.S. citizen _____

1. What year is referred to as Einstein's "Miracle Year"? Why is it called this?
2. On what 5 topics did Einstein write, and submit for publication, papers in that year?
3. What was his job at the time? Where?
4. a. In what year and for what scientific concept did Einstein receive the Nobel Prize in physics?

b. Describe this concept. What famous scientist first proposed this idea in 1900?
5. a. What are the 2 fundamental postulates of the Special Theory of Relativity?

b. What is the significance of Maxwell's electromagnetic equations (1873) to the theory?

- c. What is the significance of the Michelson-Morley experiments (1881-1887) to the theory?
 - d. According to the theory, what ~~3~~ things happen to an object moving close to the speed of light (as viewed by an outside observer)?
 - e. What experimental proof is there that these things really happen?
 - f. What is the “twin paradox”?
6. What is the meaning of the equation $E = mc^2$? What important application does it have?
7. What is the General Theory of Relativity? When was it finally completed?
8. What hobbies did Einstein have?