

Thai students' ideas about an image formed by a plane mirror

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Abstract

Optical phenomena usually occur in every day life. However many previous researches revealed that students still had some misconceptions concerned with optics. Although students already studied basic optics in high school, the student's conceptions are always approached when lecturers start teaching the topic at a university. This study aims to assess university student's preconceptions about an image formed by a plane mirror. The two conceptual questions were designed corresponding to the previous physics education research. Those conceptual questions were administered to 190 first year science-program students before the lecture started. For the first question, the students were asked to indicate the position of an image formed by a plane mirror. Surprisingly, from students' responses that were categorized into 6 groups; there were only 51.1% of all students who thought that the position of an image formed by a plane mirror is behind the plane mirror which is the correct answer. The other 48.9% of the students which is a huge number still had some misconceptions and could not identify an image's position. For the other conceptual question, students were asked to predict the position of an image formed by a plane mirror when an observer moves himself from the beginning position to another position while the object was still placed in front of a plane mirror at the same position. From students' responses, about 20.5% of all students thought that the image's position depended on the position of an observer. The suggestions are introduced for teaching this topic in the class.

Keyword: An image, a plane mirror and students' misconceptions.

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