**Physics**

**Group quiz on Index of refraction, Snell's Law, and Critical Angle**

Name

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**12JK – Index of Refraction and Snell’s Law**

12JK.1. What is the index of refraction of a substance where the speed of light is 1.13 x 108 m/s?

12JK.2. What is the speed of light in lucite? n = 1.51

12JK.3. A laser makes an angle of 51.0o with the perpendicular from air on a liquid with an index of refraction of 1.46. What is the refracted angle? (Air is n = 1.0003)

12JK.4. Light goes from water (n = 1.33) with an incident angle of 57.0o into glass where the refracted angle is 49.0o. What is index of refraction of the glass?

12JK.5. What is the critical angle for the interface between Lucite (n = 1.51) and air (n = 1.0003)? In which substance does the critical angle exist?

12JK.6. The critical angle between plastic and air (n = 1.0003) is 43.2o. What is the index of refraction of the substance?