ACADEMIC PHYSICS – (RED)

Unit 1: Waves Lesson 3: Refraction of Light -\_Lenses

* 1. I can explain the behavior of light in refraction.
  2. I can measure the amount of bending that occurs when light travels from one medium to another and relate that bending to Snell’s Law.
  3. I can calculate the amount of bending that light will undergo as it passes through a given material.
  4. I can determine the velocity of light in a material from information about the amount of bending the light experiences in the material.
  5. I can describe how Snell’s Law dictates the types of images that occur in thin lenses.
  6. I can predict the size and location of an image in a thin lens using both mathematical and graphical methods.

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| ACTIVITY | TIME ALLOTMENT |
| Outside Reading Reference: Chapter 17: p. 395-409,  Chapter 18: p. 429-438. | HW |
| Refraction and Snell’s Law | 1 |
| Snell’s Law Lab | 3 |
| **HW – Book – Chap 17 –** p 410; 10, 11, 20 – 24, 50-55 (Snell’s Law)  **Chap 18 -** p. 440; 10-12, 21-24, 35 – 39 (lenses) | HW |
| Snell's Law Statistical Analysis | HW |
| Converging and diverging lenses drawings | HW |
| Focal Length of Lenses Lab | 4 |
| Review | 2 |
| **TEST** | 1 |
| TOTAL | 11 |

Pg. 410

50. 24.4o

51. 1.41

52.

53. 60.8o

54. red light, 12.0o;blue light, 11.8o

55. a. 1.96e8 m/s b. 1.96e8 m/s

Pg. 440

36. a. 66.7 cm b. 1.67 times

37. a. 51 mm b. 1.01e3 mm

38. 14 cm

39. 56 cm