ACADEMIC PHYSICS

1. Mirrors - Reflection of Light
   1. I can explain the behavior of light in reflection and relate it to the previously studied behavior of waves.
   2. I can explain that light does not need a medium for transmission.
   3. I can describe the difference between regular and diffuse reflection.

2.3 I can show that the Law of Reflection applies to light waves and apply that knowledge to construct an image of an object in a plane mirror.

* 1. I can explain how the Law of Reflection determines the types of images that occur in curved mirrors.
  2. I can predict mathematically the location and size of an image in a curved mirror.

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| ACTIVITY | TIME ALLOTMENT |
| Outside Reading Reference: Chapter 17: p. 393-394,  Chapter 18: p. 415-428. | HW |
| Light Waves: Reflection & Images Lab  Reflections and Images – Part C | 2  HW |
| **HW – BOOK;** p. 410; 1-3, 16, 31.  p. 439; 1-9, 13-20, 25-34 | HW |
| **HW -** Mirror Problem Worksheet | HW |
| **HW –** Curved Mirrors Practice | HW |
| Curved Mirror Lab | 2 |
| Review | 1 |
| **TEST** | 1 |
| TOTAL | 6 |

Pg. 410

31. a. 53o b. 106o

Pg. 439

25. 2.4 m

26. 20.0 cm

27. 75 cm

28. 3.0e1 cm; -1.8 cm

29. a. -24 cm b. 9.0 cm

30. 5

31. drawings

32. a. b. 4.0 cm c. -8.0 mm

33. a. b. 32 mm

34. -9.4 cm; 0.75 cm

Mirror Problems WS

1. -2.5 ft.
2. -3.3 m behind; virtual
3. -42 cm behind; virtual
4. 3.93 m; -0.191 m
5. -9 cm; convex; 1 cm upright
6. 17.14 cm; -2.14 cm inverted; smaller

Curved Mirrors Practice

1. S
2. R
3. P
4. M
5. W
6. Object 3 (convex), Object 5 (concave in front of f )
7. Plane – always ; Concave – when object at C ; Convex – when object touches mirror surface
8. Plane and Convex – always upright Concave – Object between F and mirror
9. Only Concave can produce real image – only if object further than F from mirror
10. Convex only – image upright and smaller (concave- if image upright it is enlarged, Plane – image same size)

Mirror Equation Problems

1. di = 22.5 cm hi = - 2.5 cm
2. di = 30 cm hi = - 5 cm
3. di = 60 cm hi = - 15 cm
4. di = -30 cm hi = 15 cm
5. di = 19.2 cm Must be real, all inverted are real
6. di = 44 cm f = 14.7 cm Must be real, all inverted are real
7. di = - 8.1 cm
8. f = -36.6 cm
9. di = - 8.1 cm hi = 0.909 cm
10. di = -7.5 cm