15.3 Reflection  

Physical Science – Irvin

Name _________________________________

Use the information in section 15.3 of your text (pages 506-509) to complete the drawings and answer the questions.

1. What is a light ray?

2. The study of light in cases in which light behaves like a ray (wave) is called __________________________.

3. Using light rays, one can trace the path of light in geometrical drawings called __________________________.

4. Complete the ray diagram below showing the difference in how light is reflected from a rough surface and a smooth surface.

5. If a surface is rough, light striking the surface will be reflected __________________________.
   Such reflection of light into random directions is called __________________________ reflection.


7. Fill in the blanks in this diagram of a light ray hitting a smooth surface. Use the following words: angle of incidence, angle of reflection, incident light, normal, reflected light

   FIGURE 1

   __________________________

   __________________________

   __________________________

8. The law of reflection states that $\theta$ __________________________ is always equal to the $\theta$ __________________________.

9. $\theta$ is the Greek symbol “theta” and the symbol for __________________________ while $\theta'$ is the symbol for __________________________.

10. What is a virtual image?
11. Complete the ray diagram using dotted lines to show where the virtual image will be formed in the plane (flat) mirror. Draw the image (stick figure is fine).

12. The concept map below summarizes the different surface of mirrors and the types of images produced by mirrors. Use the following terms to complete the map (terms may be used more than once): enlarged, inverted, no image, real image, same size, smaller, surface curved inward, surface curved outward, upright, virtual image.