

## science Review 2

**PART A.** Use the words from the box to complete the following statements. Use each word once.

concave – image – rays – convex – regular reflection – plane – difusse reflection – metal –  
virtual

1. \_\_\_\_\_ are light waves represented as straight lines.
2. \_\_\_\_\_ happens when parallel rays of light hit a smooth surface. All the light rays reflect at the same angle because of the smooth surface.
3. An \_\_\_\_\_ is a copy of the object formed by reflected or refracted rays of light.
4. Shiny surfaces such as \_\_\_\_\_, glass, and calm water produce regular reflection.
5. \_\_\_\_\_ reflection happens when parallel rays of light hit an uneven surface. Each ray hits the surface at a different angle because the surface is uneven.
6. A \_\_\_\_\_ mirror is a flat sheet of glass that has a smooth, silver-colored coating on one side.
7. A plane mirror produces a \_\_\_\_\_ image that is upright and the same size as the object.
8. A \_\_\_\_\_ mirror curves inward like the inside of a bowl.
9. A \_\_\_\_\_ mirror has a surface that curves outward.

**PART B.** Answer the following questions with clear and complete answers.

1. What causes refraction?

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2. What is the index of refraction?

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3. According to the following chart:

Index of Refraction	
Medium	Index of Refraction
Air (gas)	1.00
Water (liquid)	1.33
Ethyl alcohol (liquid)	1.36
Quartz (solid)	1.46
Corn oil (liquid)	1.47
Glycerol (liquid)	1.47
Glass, crown (solid)	1.52
Sodium chloride (solid)	1.54
Zircon (solid)	1.92
Diamond (solid)	2.42

a. Which medium causes that light rays bend the least?

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b. What would happen if a light ray enters air, then passes through zircon and exits through air again?

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4. How are rainbows formed?

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5. Name the colors that make up a rainbow.

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