Fill in a T/F answer for each statement below:

1. [  ] For reflection of light, the angle of reflection equals the angle of incidence.

2. [  ] The speed of light is the same in all optical mediums.

3. [  ] The frequency of a light ray is the same when the light travels from one medium to another.

4. [  ] The index of refraction indicates the ability of a medium to bend the light beam as refraction occurs.

5. [  ] When you see a fish in water from a boat, the fish is actually not at where you think it is.

6. [  ] Total internal reflection can occur when light travels from vacuum to an optical medium with higher index of refraction.

7. [  ] The reason that a prism can produce a colorful spectrum from a white light source is that its index of refraction is a function of light frequency.

8. [  ] When a light beam of wavelength $\lambda$ is incident on a slit of width $d$, the ray approximation is valid when $\lambda \approx d$.

9. [  ] Optical fibers rely on total internal reflection to prevent light lose at the surfaces of the fibers.