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## Indices of Refraction

Vacuum	1.00
Water	1.33
Glycerol	1.47
Plexiglas	1.51
Glass (flint)	1.65
Diamond	2.42

 $3.00 \times 10^8 \text{ m/s}$ 

2. Define "refraction".
3. At what angle would a light ray have to travel in order to **not bend** when travelling through the boundary into a medium with a different index of refraction?
4. Define "angle of incidence".
5. Describe the refracted ray when a ray passes into a medium with a greater index of refraction.  
Slower/Faster (circle one)                      Closer to/Farther from the normal (circle one)
6. Which diagram(s) above could illustrate the passing of a light ray from water to air?
7. Using diagram C as an example, give the labels that represent the following...  
a.incident ray  
b.angle of reflection                      \*\*\*put a, b, c, and d on Diagram C above!  
c.boundary  
d.refracted ray
8. How does the "index of refraction" of all other media compare to that of light passing through a vacuum? (circle one)  
greater than                      **OR**                      less than
9. How does the speed of light in all other media compare to that of light in a vacuum?  
greater than                      **OR**                      less than
10. Calculate the speed of light in glycerol.
11. Calculate the "index of refraction" of a medium where the speed of light through it is  $1.24 \times 10^8$  m/s.