

Refraction

①

air $n=1$
water
 $n=1.33$
 H_2O

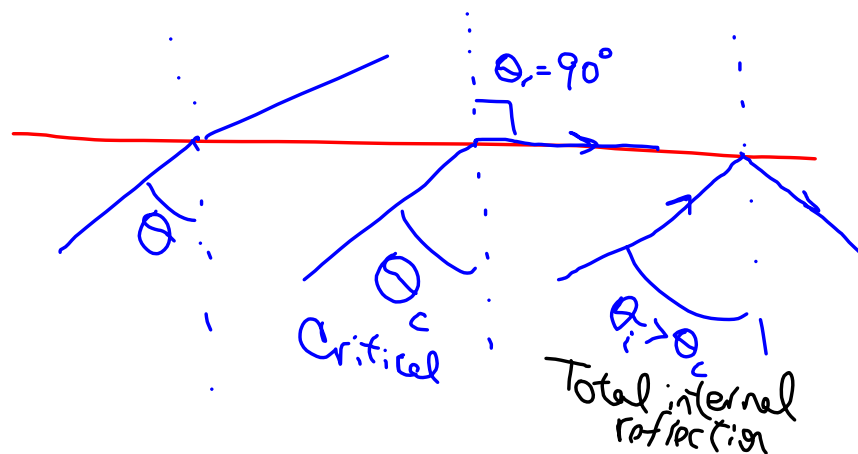
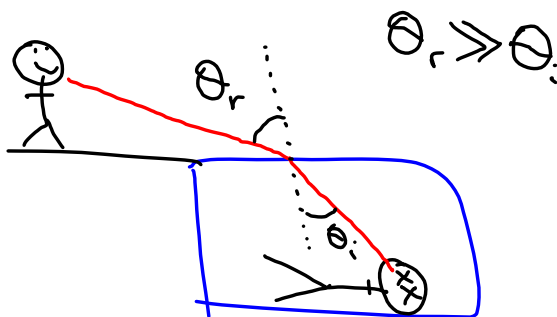
$$n = \frac{c}{v}$$

Snell's Law

$$n_1 \sin \theta_1 = n_2 \sin \theta_2$$

PS696
for index of refraction

②



Light travels in straight lines,
that is unless somehow it's turned.
It can reflect (or bounce right back),
But that's quite eas'ly learned.
Refraction is the property
with which we're now concerned:

Chorus: Oh - Sin theta-one times index one
is equal to
Sin theta-two times index two!

$$n_1 \sin \theta_1 = n_2 \sin \theta_2$$

Refraction is the bending
which is caused by changing speed.
When entering at an angle,
light will bend, and then proceed--
to travel in a new straight line,
wherever that may lead.

Oh - Sin theta-one times index one
is equal to
Sin theta-two times index two!

Now since the bending's caused by changing
speed, we have a clue
To calculate light's speed in any medium, (it's
true!)
n-one v-one is equal to n-two times v-two.

Oh - Sin theta-one times index one
is equal to
Sin theta-two times index two!

When slowing down the light bends 'toward the
normal' as they say.
When speeding-up it will bend from the normal
away --
Until the angle critical is reached to our dismay!

Oh - Sin theta-one times index one
is equal to
Sin theta-two times index two!

