

Kinds of Light

Blender

Point

Sun (Directional)

~~Point~~ Spot

Area

Area Lights

↳ Soft + Shadows

Sun (Directional Light)
↳ Direction only

Point Light



↳ Position (used to calculate direction)

↳ Radius + Falloff Function

↳ R^2 drop off

Spot Light - Flash Light

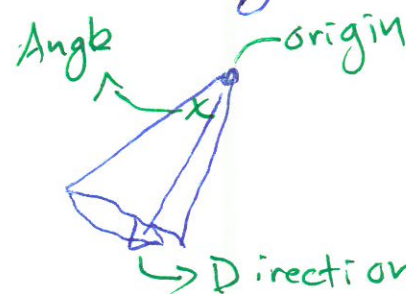


Position

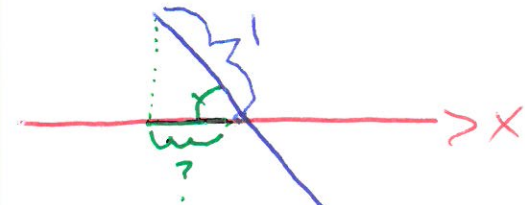
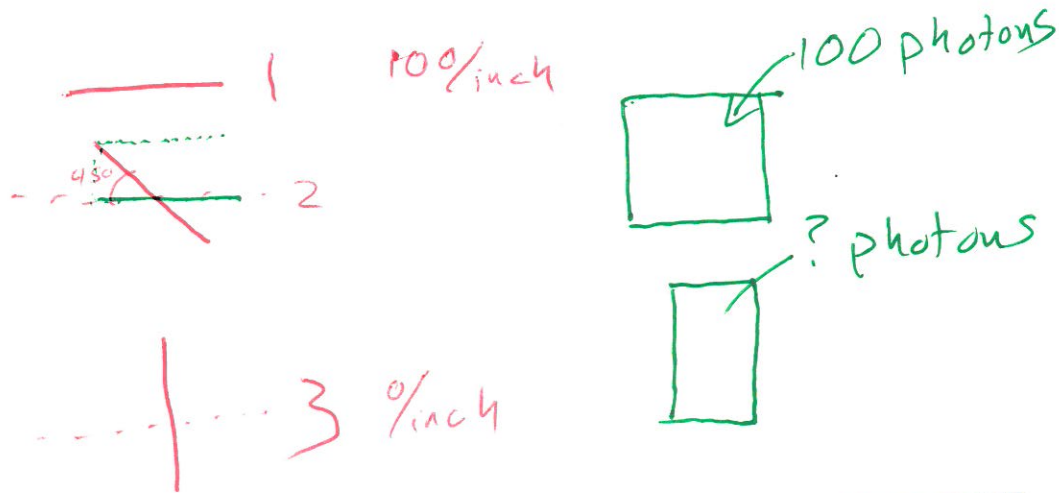
Angle

Direction

Falloff



How to (not) Get A Tan



Know angle
Know length of
the ~~long side~~.
hypotenuse

Trig Review



$$\cos(\theta) = \frac{\text{Adjacent}}{\text{hypotenuse}}$$

$$\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\tan(\theta) = \frac{\text{opposite}}{\text{Adjacent}}$$

$$x = \cos(\theta) \cdot \text{radius}$$

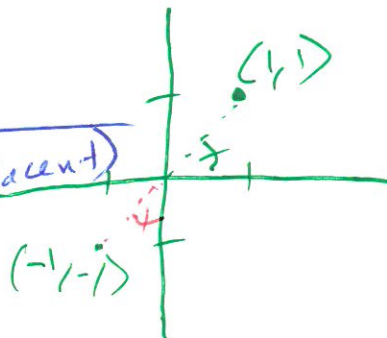
$$y = \sin(\theta) \cdot \text{radius}$$

$$\text{atan}\left(\frac{\text{opposite}}{\text{Adjacent}}\right) = \theta$$

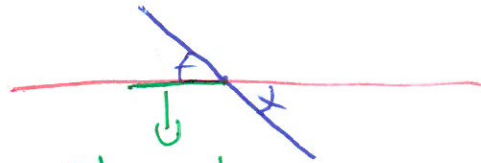
Broken

$$\text{atan2}(\text{opposite}, \text{adjacent})$$

$$\text{atan2}(y, x)$$



Use of Trig



$$\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$$

if 1