

Random Walk

$$d = \sqrt{n} * \ell$$

D=total straight line distance traveled

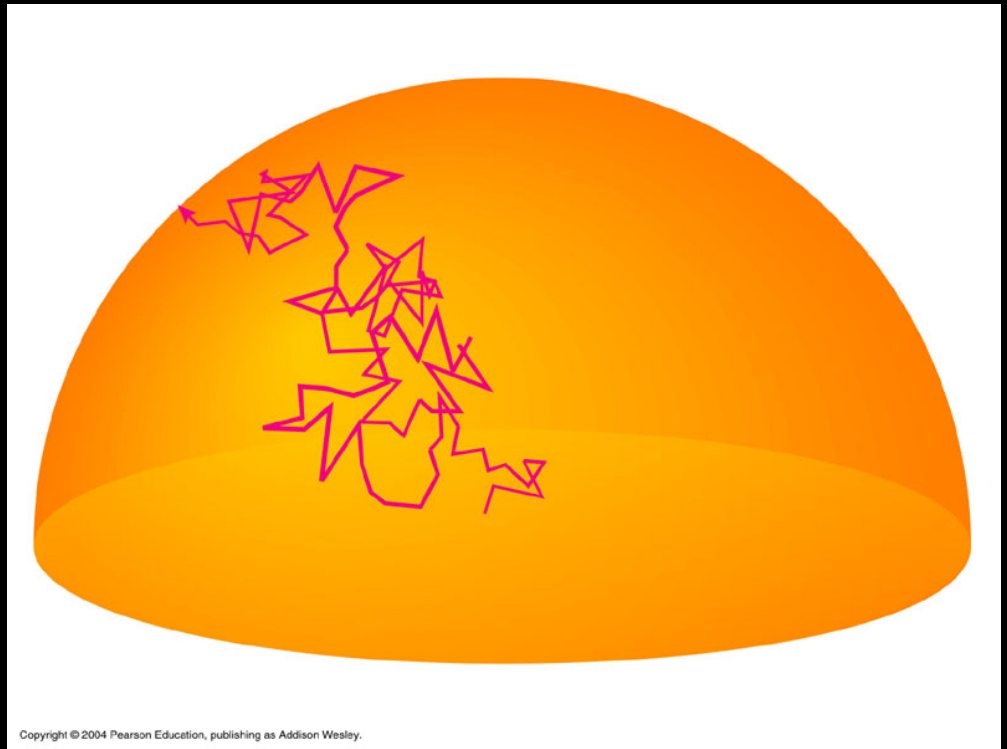
N=number of steps taken

l=Mean free path

How far does a photon need to go (straight line distance) to escape the sun?

Radius of Sun=695,500km

Mean free path in sun=ranges from 0.01cm in core to 0.3cm in outer layers



How far does it actually travel? At what speed?

Speed of light= 3×10^8 m/s