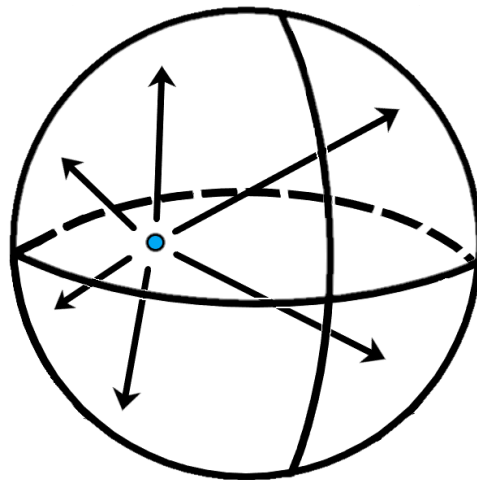


Blinding Sphere



The **light intensity** from a point source to another point in space is $1/r^2$, where r is the distance between the two points. This ensures that as light travels outward from a point in an expanding sphere the total light intensity is constant, because the sphere's area grows proportional to r^2 .

Problem: If every point on a unit sphere is a light source, find the average intensity experienced by a point which is p units from the center.



Submit your solution online by scanning QR code and filling out the form, or submit at

sites.google.com/unomaha.edu/unopow

A photo of handwritten work is fine. You can also turn in solutions physically at the UNO math department's mail room (located on the second floor of the Durham Science Center).