**CS 147 Spring 2021 Assignment 5 Questions – Saylor Schwab**

1. A picture containing pool ball, sport, light

   Description automatically generatedA picture containing bubble chart

   Description automatically generatedIn Gouraud shading, normal at a vertex are defined by normalizing the average of all normals of the polygons that the vertex shares, which produces a very smooth image. Phong shading, however, interpolates normals across each polygon. Until recently, Phong shading could only be done offline since it requires interpolating normals across each individual polygon. It also requires applying the lighting model to each fragment, which is where the name fragment shading originates.

Gouraud Phong

1. The shininess coefficient is one of the non-realistic components of the Phong Reflection Model. Not all materials will have that ability to reflect light back like plastic and glass do, so the shininess coefficient manipulates the materials to have that reflection occur.